Mississippi Valley Conservation Authority

# Board of Directors Meeting

Hybrid meeting (via Zoom) 1:00 pm July 8, 2024

MVCA Boardroom

## AGENDA

**ROLL CALL**

**Declarations of Interest (written)**

**Adoption of Agenda**

**MAIN BUSINESS**

1. Minutes:
    a. Approval of Board of Directors Meeting Minutes, May 13, 2024, Page 2
    b. Receipt of Draft Minutes: Policy & Planning Advisory Committee Meeting, June 19, 2024, Page 10
2. Employee Presentation: Enforcement Activity Update, Will Ernewein
3. GM Update, Report 3428/24, Sally McIntyre, Page 15
4. Appointment to Public Advisory Committee, Report 3429/24, Sally McIntyre, Page 25
5. Carp River Floodplain Mapping, Report 3430/24, Juraj Cunderlik, Page 27

*Report rising from the Policy and Planning Advisory Committee:*

6. Land Conservation Strategy – Current State, Report 3426/24, Sally McIntyre, Page 32

*IN CAMERA:*

7. K&P Trail Update, Report 3431/24, Scott Lawryk
8. Water & Sewer Update, Report 3432/24, Scott Lawryk

**ADJOURNMENT**

Mississippi Valley Conservation Authority

**MINUTES**

Hybrid Meeting Via Zoom and at MVCA Office | Board of Directors Meeting | May 13, 2024

**MEMBERS PRESENT**
Paul Kehoe, Chair
Jeff Atkinson, Vice Chair
Allan Hubley
Allison Vereyken (Virtual)
Andrew Kendrick (Virtual)
Bev Holmes
Cathy Curry
Clarke Kelly (Virtual)
Dena Comley
Glen Gower
Helen Yanch
Janet Mason
Mary Lou Souter
Roy Huetl
Steven Lewis
Taylor Popkie

**MEMBERS ABSENT**
Cindy Kelsey
Richard Kidd

**STAFF PRESENT**
Sally McIntyre, General Manager
Juraj Cunderlik, Director of Engineering
Scott Lawryk, Property Manager
Stacy Millard, Treasurer
Alex Broadbent, Manager of IC&T
Bryan Flood, Water Resources Engineer
Joe Arbour, Maintenance Technician
Krista Simpson, Administration Assistant
Kelly Hollington, Recording Secretary

P. Kehoe called the meeting to order at 1:00 p.m.

P. Kehoe addressed the Board with an apology and explanation for his critique of the KPMG PowerPoint presentation at the April 8, 2024 Annual General Meeting.

Declarations of Interest (Written)

Members were asked to declare any conflicts of interest and informed that they may declare a conflict at any time during the session. No declarations were received.

Agenda Review

P. Kehoe noted that there were no additions to the agenda.

**BOD24/05/13 - 1**

**MOVED BY: J. Atkinson**

**SECONDED BY: T. Popkie**

**Resolved, that the agenda for the May 13, 2024 Board of Directors Meeting be adopted as presented.**

**"CARRIED"**

**MAIN BUSINESS**

1. Approval of Minutes: Board of Directors Meeting, April 8, 2024.

P. Kehoe noted no additions or changes to the minutes.

**BOD24/05/13 - 2**

**MOVED BY: H. Yanch**

**SECONDED BY: M. Souter**

**Resolved, that the minutes of the Board of Directors Meeting held on April 8, 2024 be received and approved as presented.**

**"CARRIED"**

2. GM Update, Report 3417/24, (Sally McIntyre)

S. McIntyre presented the GM Update. She highlighted several items:

- The Carp River Floodplain mapping open house was held on May 2nd, 2024. MVCA received many questions and is taking time to investigate these items and discuss with landowners. The report is planned to be tabled with the Policy & Planning committee in June and to the Board of Directors in July.
- The Kashwakamak Class Dam Environmental Assessment (EA) Public Information Centre is scheduled for May 23, 2024. Public notices have been issued for the PIC, which will be held virtually. The PIC will be used to review the EA process and steps taken to date,

provide interim findings, and provide an opportunity to answer questions and to hear comments and concerns. The preferred solution will be presented to the Board of Directors following the consultation period.

- The Land Cover Update was completed in partnership with Rideau Valley (RVCA) and South Nation (SNCA) conservation authorities with funding from a grant through the federal government. MVCA now has an updated land use map layer that is used for floodplain mapping.
- The 2024 field monitoring program will be focused on the Clyde River subwatershed as well as Crotch Lake, Dalhousie Lake and Mississippi Lake.
- The 2024 Summer Camp program is almost sold out with just 8 spaces remaining.
- MVCA is in discussions with RVCA and Toronto Region Conservation Authority (TRCA) regarding shared service agreements. She noted that MVCA has a longstanding relationship with RVCA on some shared services. Draft agreements will be brought to the Board for approval.
- Several summer students joined MVCA. As of yet, MVCA has not received notification of receiving any student grants. She noted that traditionally the students are hired before confirmation of grants.
- The Latornell Conservation Symposium is scheduled for October 8-9. MVCA staff attended in 2023 and plan to attend again in 2024. She explained that any board members interested in taking on a leadership role should consider conference. She noted that the Chair position is a 2-year term and P. Kehoe is currently in his second year. She encouraged members of the Board to consider taking on a leadership role and to connect if there is interest in attending the conference. J. Mason has attended 3 times in the past. J. Mason commented that she highly recommends attending the Latornell Conservation Symposium to members interested in any committee leadership roles, and all members generally.

J. Mason asked for clarification on the difference between flood control and stormwater management in regards to the Glen Cairn Detention Pond. J. Cunderlik explained that the Glen Cairn facility was designed and built as a flood control facility, not as a storm water management pond. He noted that it is the only flood control facility within the Carp River corridor. Most stormwater facilities in the Upper Carp River watershed are designed to handle up to 1:10 year flood, whereas the Glen Cairn facility was designed to handle larger storm amounts.

J. Mason asked if the facility was designed in response to the flooding events in the area in 2009. J. Cunderlik responded that he believed it was in relation to the development of the Glen Cairn area. He noted that the original Upper Carp River lost floodplain capacity due to it being channelized, and MVCA has noted a large increase in the flows from that portion of the

watershed since being developed. J. Mason noted that stormwater ponds take off surface water from hardscapes and asked if that helps with flood control. J. Cunderlik responded that it is difficult to determine and is dependent on the timing of the release of water and the peaks of water levels in the area.

A. Hubley added that he was involved in the reports and works completed after the 2009 flooding events in Glen Cairn address flooding. He noted that 10 million dollars was invested in the Glen Cairn Detention pond. The City of Ottawa dredged the area to increase the facility's capacity. He explained that during the 2009 flooding events, water backed up from the stormwater ponds into the system.

3. WECI Program Update, Report 3418/24, (Juraj Cunderlik)

J. Cunderlik provided an update regarding the status of the annual call for proposals under the provincial Water & Erosion Control Infrastructure (WECI) funding program. He explained that the Ministry of Natural Resources (MNRF) provides matching funds to Conservation Authorities for infrastructure projects. He highlighted that MVCA heavily depends on funding through the WECI program; the majority of capital projects indicated in the 10-year capital plan rely on this program. He reviewed major changes to the 2024 program application process that have presented significant challenges. He explained that the most significant challenge for MVCA will be completing the projects planned for 2024 in the time remaining in the year after confirmation of funding. He noted that applying for projects over a 2-year span is problematic because infrastructure projects rely on studies to inform and define the scope of work for the next phase of the project. He highlighted outlined the projects that would be submitted, and stated that if MVCA is unsuccessful in any one of those projects that there will not be another call for applications until 2026.

P. Kehoe commented that he forwarded these concerns to the office of Lanark-Fontenac-Kingston MPP, John Jordan.

R. Huetl asked for confirmation that the Condition Assessment of Farm Lake will be completed in 2024. J. Cunderlik confirmed.

Ice Management Strategy, Report 3419/24, (Juraj Cunderlik, Bryan Flood & Joe Arbour)

J. Cunderlik presented MVCA's *Ice Management Plan* and noted that all Conservation Authorities must design and implement and *Ice Management Plan* by the end of 2024. He highlighted the primary objectives of MVCA's plan including informing flood forecasting and warning, shoreline erosion and monitoring activities and to understand how the ice regime is changing. He explained that ice formation, duration and depth, is very sensitive to changes in climate.

He stated that MVCA began by drafting a monitoring program that was carried out the winter of 2022, amended and undertaken again the winter of 2023. He stressed that staff safety is very important and an integral part of the ice monitoring program. Staff that conduct ice monitoring must have valid ice safety training. He noted that MVCA has developed a standard operating procedure (SOP) and a detailed work plan regarding ice monitoring practices.

B. Flood overviewed the Ice Monitoring Program. He listed the ice hazards that MVCA monitors for including river ice (ice jamming), frazil ice and lake ice. MVCA monitors rivers in 9 locations on an as-needed basis and 3 lakes on a bi-weekly and as-needed basis: Mazinaw Lake, Mississippi Lake and Silver Lake to represent the upper, middle and lower watersheds. He highlighted the triggers to monitoring activities and said that no observed ice jamming, ice build-up or flooding associated to ice occurred in the past two years.

B. Flood further explained that ice thickness is measured on multiple sites on the lakes to gain an understanding of spatial variability of the ice and a lake-wide representation of thickness. Field data is used to develop and calibrate a model to predict ice thickness and inform future monitoring needs and field work. He explained that MVCA also runs a Citizen Science program that engages lake residents to collect ice data: ice-on, freeze up, break up, and ice-off.

J. Arbour explained that ice monitoring technicians are required to complete a two-day ice water rescue course that includes self-rescue and rescuing another person. Monitoring technicians work in teams of three and provided photos and video of field work demonstrating use of the pole test and the presence of gas holes on Silver Lake caused by decomposing plant matter increasing water temperatures.

H. Yanch asked about testing on Silver Lake. J. Arbour confirmed the location is north of the park, South Mazinaw Heights Road. H. Yanch commented that the ice was not readily accessible during the 2023-24 winter season.

A. Kendrick asked if MVCA will be making the ice monitoring information available to the public and if there are concerns regarding liability issues of releasing ice thickness data to the public. B. Flood responded that MVCA is not planning to publish the information due to liability concerns. The data is not representative of all lakes within the watershed.

A. Kendrick asked what will be included in the end-of-year report. B. Flood responded that a report will be prepared at the end of each monitoring season, however the timing of any release had not been discussed. S. McIntyre responded that an approach has not been agreed upon at this time. She explained that MVCA will come back to the Board for a recommendation on if or how ice monitoring data will be released. She noted that this information is not intended to inform recreational users on when it is safe to use the ice.

C. Curry noted the use of drone footage to monitor ice conditions. She asked if MVCA staff have collaborated with Hydro One or Hydro Ottawa on the use of drone technology for monitoring

activities. B. Flood responded that MVCA has not been in contact with Hydro One or Hydro Ottawa regarding drone use. C. Curry encouraged collaboration with external groups on how to effectively use drones for monitoring activities.

M. Souter asked if there were significant changes in the results between the first and second year of the program. B. Flood confirmed that the two years were significantly different due varying weather conditions.

J. Mason commented that the development of the *Ice Management Plan* is a regulatory requirement for the end of 2024 and MVCA began development prior to its introduction. She asked if it is being completed to the same level. B. Flood explained that MVCA began the development of the *Ice Management Plan* in anticipation of the new legislation in order to have a more informed plan in place.

J. Mason asked how useful the information is. B. Flood noted that the data is useful for informing projects. J. Mason asked about the costs associated with the *Ice Management Plan*. S. McIntyre responded that there was an initial investment in equipment and training and an estimated ongoing cost between $5k and $10k. J. Cunderlik clarified that that was the initial investment required and that the annual investment is closer to $2k, but will vary depending upon periodic training requirements.

P. Kehoe thanked the MVCA team for getting the *Ice Management Plan* in place.

**BOD24/05/13 - 3**

**MOVED BY: D. Comley**

**SECONDED BY: R. Huetl**

**Resolved, That the Board of Directors approve the *Ice Management Plan* attached to report 3419/24.**

**"CARRIED"**

4. Palmerston-Canonto Conservation Area (PCCA) Lease Renewal, Report 3420/24, (Scott Lawryk)

S. Lawryk explained that MVCA has a lease agreement with the Township of North Frontenac to maintain the PCCA, and entered into an Option to Purchase Agreement with the Township for the beach portion in 2017. Several land ownership conflicts were identified at the beach that have yet to be resolved. The lease agreement for the Conservation Area is up for renewal and S. Lawryk recommended renewal of the 5-year lease while continuing to pursue resolution of the land ownership conflicts at the beach. Once ownership issues are resolved, a purchase

agreement would be tabled with the Board of Directors for the beach and the lease agreement could be amended.

**BOD24/05/13 - 4**

**MOVED BY: G. Gower**

**SECONDED BY: J. Mason**

**Resolved, That the Board of Directors authorize renewal of the 5-year lease with the Township of North Frontenac to operate and maintain Palmerston-Canonto Conservation Area including the beach and associated amenities.**

**"CARRIED"**

5. Land Conservation Strategy Update, Report 3421/24, (Sally McIntyre)

S. McIntyre provided an update to the Board on the Land Conservation Strategy, a mandatory deliverable by the end of 2024. The "current state" document is nearing completion and a needs assessment is under-way. These tasks are scheduled to be tabled with the Policy and Planning Committee in June and to the Board in July. She stated that she is reaching out to service provider partners including the Mississippi Madawaska Land Trust, Climate Network Lanark, and local farming and agricultural entities. Meetings have been scheduled with member municipality councils with plans to present at County Council meetings. A meeting has been scheduled with relevant City of Ottawa staff who are involved in similar work. She highlighted the importance of targeted outreach to ensure clarity on MVCA's objectives around *Land Conservation Strategy* and to collaborate on shared issues.

6. Designation of a Provincial Offences Officer – Rachel Clouthier, Report 3422/24, (S. McIntyre)

S. McIntyre explained that the Board has to delegate powers for R. Clouthier to be able to enforce Ontario Regulation 41/24 and 686/21 under the *Conservation Authorities Act.*

**BOD24/05/13 - 5**

**MOVED BY: C. Curry**

**SECONDED BY: J. Atkinson**

**Resolved, That the Board of Directors appoint Rachel Clothier to enforce Ontario Regulation 41/24 and Ontario Regulation 686/21 of the *Conservation Authorities Act.***

**"CARRIED"**

7. Proclamation of New Ministerial Powers under the *Conservation Authorities Act* (ERO # 019-8320), Report 3423/24, (Sally McIntyre)

S. McIntyre explained that the powers that have been proclaimed by the Minister were already set out in the *Conservation Authorities Act (CA Act).* She summarized the ministerial powers now in effect. She highlighted that the Minister will have the ability to prevent a CA from issuing a permit, will control the permitting process, but may have no liability for the approved permit. She reviewed the recommendations submitted by Conservation Ontario to the province and noted that no response had been received. She emphasized the importance of the Province engaging with conservation authorities on how the Minister's new regulatory powers would be implemented.

J. Mason asked if conservation authorities would be held liable for decisions that the Minister makes and could possibly be sued. S. McIntyre confirmed that this was a possibility and a major concern raised to the province.

8. Financial Update – YTD March 31, 2024, Report 3424/24, (Stacy Millard)

S. Millard provided the Financial Update as of March 31, 2024. She highlighted that the budget is on track, and expenditures and revenues sit just under 25% after the first quarter. She stated that MVCA had not yet received summer student grant approvals for 2024. MVCA had assumed roughly $30k in grant funding out of a $70k summer student budget. She noted that consideration is needed to determine if future budgeting should take into consideration receiving summer student grants as the process and results were unreliable. She also explained that permit revenues were tracking higher than predicted, at 37% of the annual budget. Interest revenue is higher than budgeted at 34% of the annual budget, with interest rates continuing to increase.

**ADJOURNMENT**

**BOD24/05/13 - 6**

**MOVED BY: H. Yanch**

**SECONDED BY: M. Souter**

**Resolved, That the Board of Directors meeting be adjourned.**

**"CARRIED"**

The meeting adjourned at 2:05 p.m.

K. Hollington, Recording Secretary

Mississippi Valley Conservation Authority

**MINUTES**

| | | |
|---|---|---|
| Hybrid Meeting Via Zoom and at MVCA Office | Policy & Planning Advisory Committee Meeting | June 19, 2024 |

| | |
|---|---|
| **MEMBERS PRESENT** | Bev Holmes, Chair (Virtual)<br>Dena Comley, Vice Chair<br>Cindy Kelsey<br>Clarke Kelly (Virtual)<br>Glen Gower (Virtual)<br>Helen Yanch (Virtual)<br>Paul Kehoe<br>Steven Lewis<br>Taylor Popkie |
| **MEMBERS ABSENT** | Jeff Atkinson |
| **STAFF PRESENT** | Sally McIntyre, General Manager<br>Stacy Millard, Treasurer<br>Alex Broadbent, Manager of IC&T<br>Juraj Cunderlik, Director of Engineering<br>Matt Craig, Manager of Planning and Regulations<br>Bryan Flood, Water Resources Engineer (Virtual)<br>Kelly Hollington, Recording Secretary |
| **GUESTS** | Faith Blacquiere |

D. Comley called the meeting to order at 2:01 p.m.

Declarations of Interest (Written)

Members were asked to declare any conflicts of interest and informed that they may declare a conflict at any time during the session. No declarations were received.

Agenda Review

D. Comley noted that there were no additions or amendments to the agenda.

**PPAC24/06/19 -1**

**MOVED BY: G. Gower**

**SECONDED BY: B. Holmes**

**Resolved, that the agenda for the June 19, 2024, Policy & Planning Advisory Committee Meeting be adopted as presented.**

**"CARRIED"**

**MAIN BUSINESS**

1. Approval of Minutes: Policy & Planning Advisory Committee Meeting, November 29, 2023.

D. Comley noted that there were no additions or amendments to the minutes.

**PPAC24/06/19 -2**

**MOVED BY: T. Popkie**

**SECONDED BY: B. Holmes**

**Resolved, that the minutes of the Policy & Planning Advisory Committee Meeting held on November 29, 2023 be received and approved as printed.**

**"CARRIED"**

2. Election of Officers, Report 3425/24, (Sally McIntyre)

**PPAC24/06/19 -3**

**MOVED BY: P. Kehoe**

**SECONDED BY: C. Kelly**

**Resolved, That Sally McIntyre be appointed as Chair for administering the election of Policy & Planning Advisory Committee Chair for 2024.**

**"CARRIED"**

S. McIntyre declared the positions of Chair and Vice Chair of the Policy & Planning Advisory Committee as vacant. She noted that the election will be carried out in accordance with procedures set out in the MVCA *Administrative Bylaw,* with election of Chair followed by election of the Vice-Chair. She asked members if there are any nominations for the position of Chair. B. Holmes offered to continue for another term as Chair. S. McIntyre asked members if there were any more nominations for the position of Chair, two more times. She declared B. Holmes to be Chair by acclamation. She asked members if there are any nominations for the position of Vice-Chair. D. Comley offered to continue for another term as Vice-Chair. S. McIntyre asked members if there were any more nominations for the position of Vice-Chair, two more times. She asked D. Comley if she accepted the position of Vice-Chair. D. Comley accepted. S. McIntyre declared D. Comley to be Vice-Chair by acclamation.

3. Carp River Floodplain Mapping Update, Report 3427/24, (Juraj Cunderlik)

J. Cunderlik provided background regarding the Carp River Floodplain mapping update. He explained that MVCA completed a flood risk assessment study in 2022 that identified the Carp River as the highest flood risk area in the watershed and the highest priority for updated floodplain mapping. This project mapped the entire 50km of Carp River including flood and erosion hazards. He noted that this is the largest floodplain mapping project that has been completed at MVCA. He outlined MVCA's approach, standards and technical guidelines followed in development of the study. He highlighted that the project was subject to an independent third-party technical review process. Forty-seven high-resolution maps were prepared. And he noted the validation process used that compared modeled results to observed flood extents and elevations. He reviewed the public consultation process. The study will be tabled with the MVCA Board of Directors in July.

B. Holmes commented that members of the agricultural community expressed concerns regarding the floodplain mapping and its implications on farming. C. Kelly commented that he has also had members of the agricultural community express concerns regarding loss of farmable land due to developments in Kanata and Stittsville contributing to an increase in flooding and drainage issues along the Carp River. C. Kelly asked if MVCA would consider a consultation in West Carleton with agricultural groups.

J. Cunderlik explained that the commenting period for the project has ended. He highlighted that MVCA has consulted with land-owners and farmers in the area to address individual concerns. He noted that the most significant changes in mapping from the 1983 data are in the upper portion of the Carp River watershed, minimal changes were noted in the lower part of the watershed. He noted that the majority of concerns received from the agricultural community are related to the perception that they cannot farm if their property lies within the regulation limit. He explained that this is not the case, it has no impact on farming and agricultural use of their lands. S. McIntyre added that MVCA has met 1:1 to address individual, specific concerns from the public.

C. Kelly asked if the increase in flooding is attributable to development in Kanata and Stittsville. J. Cunderlik responded that the Carp River watershed has a very complex hydrological regime. He explained that the upper watershed more susceptible to rain-fall events while the lower watershed is snow-melt event dominated. The water server of Canada monitors at Kinburn, which shows a trend of a decrease in maximum flows.

S. Lewis asked if there have been many changes noted between the 1983 and the new updated floodplain mapping. J. Cunderlik responded that there are very localized changes. S. McIntyre commented that the Carp River location is unique with the majority of the development lying in

the upper portion of the watershed. B. Holmes commented that she has interest in future impact studies and that they would be relevant to the Almonte and Packenham areas.

S. Lewis asked C. Kelly about the implementation of a special tax on individuals with a high percentage of paved areas on their property. C. Kelly explained that the concept was met with hostility and anger toward the City of Ottawa and that the project is scheduled for completion in 2025. B. Holmes commented that this special tax has raised concerns among the farming and agricultural communities.

G. Gower asked if the results of the new floodplain mapping update differ greatly from the Carp River Restoration Plan. J. Cunderlik responded that the Carp River Restoration Plan enhanced the Carp River corridor and created storage for future development.

G. Gower commented that he attended the Carp River Floodplain open house, with maps of the entire system around the room. He observed that the updated mapping is similar to 1983. He thanked the MVCA staff for their hard work on the project.

4. Land Conservation Strategy Consultation Package, Report 3426/24, (Sally McIntyre)

S. McIntyre presented Land Conservation Strategy consultation materials. She explained that the consultation process will address requirements for both the Land Conservation Strategy and the Watershed-based Resource Management Strategy. She overviewed the MVCA inventory of land, easements, and other properties. She highlighted the 5 key policy questions posed in the Discussion Paper:

1. What role should MVCA play in land conservation within its jurisdiction
2. Should MVCA acquire more land for conservation purposes?
3. What type of facilities should MVCA operate?
4. What type of uses should MVCA permit at its Conservation Areas?
5. How should MVCA approach the acquisition and use of water control structures?

She noted that MVCA's conservation areas are intended for passive recreation or the conservation of land. She explained that cultural heritage facilities/sites are not a Category 1 program or service. Consideration is needed regarding the management of heritage services at the Mill of Kintail Conservation Area.

She noted that consideration is also needed regarding MVCA's role in managing portage routes within the watershed. She reviewed the dams that MVCA owns and operates and their functions, emphasizing that, at the time of acquiring the dams, MVCA received a much greater percentage of funding from the province. She highlighted the importance of considering asset renewal and the long-term life of the dam structures.

S. McIntyre reviewed the public consultation process and the next steps in the engagement process. She explained that draft policies will be tabled with the Board of Directors for review in October and finalized for approval at the December Board meeting.

B. Holmes commented that care needs to be taken in the consideration of the Mill of Kintail museum. She noted that the Mill of Kintail site has potential for national and international tourism. She highlighted the value of the artifacts within the museum and the importance of their preservation.

S. Lewis commented that it is important to consider the costs and liabilities associated with land ownership.

G. Gower asked if MVCA is looking for feedback on the Strategy itself or just the consultation process and package. S. McIntyre responded that she is looking for feedback regarding the consultation process and materials, and whether members are comfortable with the key questions being posed.

D. Comley noted the importance of being clear in the definitions of preservation versus conservation and requested that these concepts be better explained. S. McIntyre agreed.

**PPAC24/06/19 -4**

**MOVED BY: T. Popkie**

**SECONDED BY: C. Kelsey**

**Resolved, That the Policy & Planning Advisory Committee recommend that the Board of Directors approve release of the attached documents for public consultation in accordance with the Consultation Plan for Development of a Land Conservation Strategy as set out in Report 3426/24.**

**"CARRIED"**

**ADJOURNMENT**

**PPAC24/06/19 -5**

**MOVED BY: S. Lewis**

**SECONDED BY: P. Kehoe**

**Resolved, That the Policy & Planning Advisory Committee meeting be adjourned.**

**"CARRIED"**

The meeting adjourned at 2:58 p.m.

K. Hollington, Recording Secretary

# REPORT 3428/24

| | |
|---|---|
| TO: | The Chair and Members of the Mississippi Valley Conservation Authority Board of Directors |
| FROM: | Sally McIntyre, General Manager |
| **RE:** | **GM Update** |
| DATE: | July 3, 2024 |

**For Information.**

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**INTERNAL**

1. **Conservation Area Projects** - The Morris Island Conservation Area roadway and parking lot upgrades have been completed. Staff are currently working on the replacement of a trail bridge at Morris Island. After completion, work will start on the refurbishment of the stairs at the Purdon Conservation Area. Pointing work has been completed on the museum chimney and full repointing of the Gatehouse commences this week. Staff are currently completing repainting of the Museum, with the hopes of being complete in the next couple of weeks (weather dependent).
2. **Summer Camps at the Mill of Kintail** - Summer Camps are sold out for all four weeks: 32 participants per week for a total of 128 campers. Camp Counselor training is taking place July 3rd and 4th, with the first day of camp on July 8th.
3. **Shoreline Plantings** – Staff are wrapping up the last of its spring shoreline plantings at five properties. A further seven private property are tentatively scheduled for the Fall, with the possibility of more based on upcoming site visits.
4. **Invasive Species Removal** - Thanks to a ~$1,725 grant from the Invasive Species Centre and in partnership with the National Capital Commission, stewardship staff and volunteers participated in an Invasive Species Pull at Watts Creek on July 3rd. Species pulled include Dog Strangling Vine and Garlic Mustard. The area will be replanted with native species in the fall, and monitored over the coming years.
5. **ALUS Mississippi-Rideau** - 14 projects across 10 properties have been approved for 2024. Six of the projects taking place over 5 properties are within MVCA's watershed, and include wetland creation and enhancement (with $50k funding support from the Danbe Foundation), pollinator grassland creation, and tree planting. Expressions of interest have already been received for 2025 projects.

6. **Training**

    - Scott Lawryk recently completed the Conservation Authorities University (CAU) Executive Development Program that is designed to provide CA executives and senior staff training on governance, finance, strategy, and business administration. The program is designed and delivered by senior leaders and discipline experts from across the conservation authority network, is CA-specific, and consists of 4 separate modules delivered over 8 months.
    - Brittany Moy and Jacob Perkins recently attended training on the Ontario Wetland Evaluation System (OWES) to become certified Wetland Evaluators. The 5-day course delivered by Nipissing University and Ministry of Natural Resources provided classroom sessions and trips to wetlands culminating in a 2-hour test at the end of the week.

7. **Kashwakamak Lake Dam EA** – A Stage 2 Archaeological Assessment of the dam site was completed in May 2024. The study recommended a Stage 3 assessment, which will either find that no further archaeological assessment is required or recommend a Stage 4 assessment. MVCA is currently verifying Stage 3 requirements with the Ministry of Culture & Multiculturalism (MCM) and has also requested a Partial Clearance for the monitoring buffer that has been currently cleared under the Stage 2. Several First Nations are actively following the project and participating during archeological field work.

8. **WECI Applications** – Several major changes were introduced to the program this year. The most significant is that the WECI will be a 2-year program and projects may be phased across two years however, funding cannot be carried over from Year 1 to Year 2. For Year 1 (2024) MVCA applied for three projects: Condition Assessment for Farm Lake Dam, Dam Safety Review for Widow Lake Dam and Dam Safety Review for Lanark Dam. For Year 2 (2025) MVCA applied for two projects: Lanark Dam Public Safety and Kashwakamak Lake Dam Preliminary and Detail Design. Funding notification for Year 1 projects is expected in July/August and for Year 2 projects in April 2025.

9. **Summer Field Season** - The Engineering Department has another busy summer of fieldwork planned with some of the main activities including: topo-bathymetric surveys for City of Ottawa floodplain mapping projects (Kinburn, Feedmill Creek, and Carp tributaries), Joe's Lake bathymetry survey, Fall River system topo-bathymetric survey, Carp River watershed streamflow monitoring, Plevna EOS accuracy study, monitoring network expansion, and regular network maintenance. Engineering summer interns, Ella and Julia, will be helping staff with the fieldwork.

10. **Board Tour** – the weather cooperated and we were able to get out to see the Kashwakamak Lake Dam and to visit Purdon Conservation Area with the orchids in full bloom. We were also

pleased to have participation from members of our Foundation and the Watershed Public Advisory Committee. A big thank you to our hosts at Fernleigh Lodge for the great food and pontoon tour. See photos at the end of the report.

**11. Staffing**

- **Elizabeth Cliffen Gallant** joined MVCA on June 24th as the new finance assistant.

**EXTERNAL**

**12. Bill 185, *Cutting Red Tape to Build More Homes Act*, 2024** – Proclaimed. See Attachment 1 for comments submitted by Conservation Ontario in May. It does not appear that amendments proposed by CO were adopted.

**13. Conservation Ontario Council Meeting** – Chair Paul Kehoe attended the June 24th meeting remotely. CO staff provided updates on various initiatives including the above matter, and other submissions related to proposed provincial legislative and regulatory changes.

**14. Nature is Infrastructure: How to Include Natural Assets in Asset Management Plans** – This guidebook for local governments was developed with the financial support of the Municipal Finance Officers' Association of Ontario in partnership with others. Download a copy here.

**15. Free Lunchtime Webinars** – The Canadian Water & Wastewater Association (CWWA) has been hosting a series of webinars over June and July. Learn more and sign-up here:

- July 10 – Canadian infrastructure Benchmarking Initiative
- July 18 – Canada Infrastructure Bank new *Infrastructure for Housing* initiative

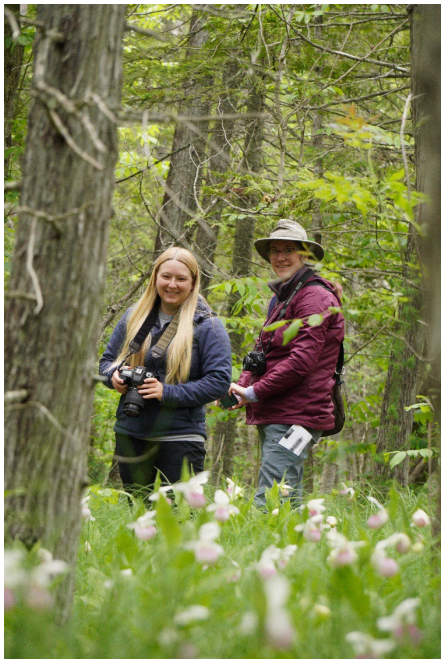
**16. *New* Trees for Life: Hero Forests program** – Trees for Life coordinates with funding partners to provide up to 75% of the costs to plant trees in recognition of local heroes (broadly defined.) Municipalities are responsible for locating 1 to 5 ha. sites within their jurisdictions and delivering the balance of the cost of the project. Learn more.

**17. Salt Symposium** – this event promotes practices that mitigate salt impacts on surface and ground water and presents current research and approaches from around the world. Livestream - August 6th & 7th, 2024.

**18. Water Use in Canada** – the May/June issue of *Water Canada* has an interesting article examining the tracking of water use across Canada.

**June 2024 Board Tour** – Fernleigh Lodge, Kashwakamak Lake

**June Board Tour** – Purdon Conservation Area




May 10, 2024

Ministry of Municipal Affairs and Housing
Provincial Planning Policy Branch
777 Bay Street, 13th Floor
Toronto, ON M7A 2J3

**RE: Conservation Ontario's Comments on the "Proposed Regulatory Changes under the Planning Act Relating to the Cutting Red Tape to Build More Homes Act, 2024 (Bill 185): Removing Barriers for Additional Residential Units" (ERO# 019-8366);**

**"Proposed Planning Act, City of Toronto Act, 2006, and Municipal Act, 2001 Changes (Schedules 4, 9, and 12 of Bill 185 - the proposed Bill 185, Cutting Red Tape to Build More Homes Act, 2024)" (ERO# 019-8369); and the,**

**"Proposed Changes to Regulations under the Planning Act and Development Charges Act, 1997 Relating to the Bill 185, Cutting Red Tape to Build More Homes Act, 2024 (Bill 185): Newspaper Notice Requirements and Consequential Housekeeping Changes" (ERO# 019-8370)**

Thank you for the opportunity to comment on the proposed legislative and regulatory changes as part of "Bill 185, the proposed *Cutting Red Tape to Build More Homes Act, 2024*". Conservation Ontario is the network of Ontario's 36 Conservation Authorities (CAs). These comments are not intended to limit the consideration of comments shared individually by CAs.

To support the Province in reaching their goal to build more homes in a safe and expedited manner, Conservation Ontario offers two key recommendations from a natural hazard and source water protection perspective.

1. **Protect people and property from natural hazards and protect sources of drinking water.** Amend Bill 185 to clarify that proposed expedited development (i.e., Additional Residential Units (ARU's), institutional uses and student housing, standardized housing,) and settlement area boundary expansions are excluded from hazardous lands and hazardous sites, areas where safe access through a natural

hazard cannot be achieved, and where development should be restricted to protect the quality and quantity of drinking water supplies.

2. **Maintain legislation that enables councils and planning authorities to pass by-laws requiring pre-application consultation**; and allow time to complete the consultation process to enable planning authorities to make complete application decisions, prior to allowing applicants to appeal to the OLT.

In the context of increasing risks due to climate change and the reduced availability of commercial/home insurance products to mitigate financial risks and losses associated with the impacts of natural hazards, we ask the Province to strongly consider the above recommendations. This will **avoid siting development in areas where there is an increased risk to public health and safety and to property damage from natural hazards (e.g., flooding and erosion), and to ensure the ongoing protection of Ontario's sources of drinking water**. The following paragraphs elaborate on the above recommendations.

## Enhancing the Framework for Additional Residential Units (ARUs)

This proposal would enhance the Minister's authority to make regulations that could remove elements of municipal zoning by-laws (e.g., maximum lot coverage, limits on bedrooms allowed per lot) for the purpose of facilitating the development of ARUs, such as basement suites.

Conservation Ontario understands the importance of increasing availability of residential units in existing and proposed residential neighbourhoods to achieve the shared goal of building 1.5 million homes in a safe and expedited manner. Equally important to increasing the supply of housing is maintaining the health and safety of people, property and infrastructure, while safeguarding the natural environment. Under the *Planning Act,* the Minister shall have regard to matters of provincial interest, including the protection of public health and safety. Where the Minister considers using the new regulation-making authority, due consideration must be applied to ensure ARUs are not located in areas susceptible to natural hazards and where safe access through the hazard cannot be achieved, in accordance with Provincial standards. Furthermore, the Province should consider the potential cumulative impacts of locating ARUs on existing lots, including increased needs for stormwater management and the potential for localized flooding during storm events, resulting from increased impervious surfaces.

**Recommendation**

Clarify the proposed Minister's regulation-making authority that would not allow the Minister to remove elements of municipal zoning by-laws that would direct ARUs outside of hazardous lands and hazardous sites and where safe access through the hazard is not achieved. Continue to empower municipalities to regulate lot coverage where there is a higher possibility that stormwater infrastructure could be overwhelmed.

## "Use It or Lose It" Tools

Conservation Ontario supports the Province's proposal to enhance lapsing authority for approvals of draft plans of subdivision/condominiums and site plan control approvals. This proposal would help address outdated approvals that do not meet modern planning standards and would allow for the impacts of natural hazards to be reassessed upon lapsing. Natural hazards are dynamic and variable [especially in a changing climate] and the proposed tool would ensure that approvals reflect the current state of natural hazard features and associated risks; to reduce potential risks to public health and safety, and to property damage.

## Municipal Pre-Application Process

The Province proposes to make municipal pre-application consultation voluntary at the discretion of the applicant and to allow an applicant to challenge complete application requirements to the Ontario Land Tribunal (OLT) once a fee has been submitted or pre-consultation has begun. This proposal will revoke the existing time-limited window once a municipality rejects an application as not being "complete".

The pre-application process provides the applicant and municipality an opportunity to develop a comprehensive understanding of the site-specific application requirements for a project. Integrated pre-consultation with applicable regulatory agencies, such as CAs, is strongly encouraged as an effective process for scoping natural hazard technical studies that establish clear submission requirements. Pre-consultation also enables CAs, acting as Source Protection Authorities, to identify whether the proposal relates to a significant drinking water threat or its potential impact on any drinking water sources protected by a Source Protection Plan. Pre-application consultation frequently streamlines the applicant's time and resources needed for a complete application and ensures natural hazard and drinking water source protection constraints are appropriately addressed. Furthermore, reasonable time should be allowed to complete the consultation process, before allowing an applicant to appeal to the Tribunal.

Should this proposal be enacted and where CAs are not included in pre-application consultation, the opportunity to address natural hazard impacts or potential impacts on drinking water sources protected by a Source Protection Plan could be missed. This may result in further delays as these impacts will need to be addressed later in the process.

**Recommendation**

Maintain the ability for councils and planning authorities to pass by-laws requiring pre-application consultation; and allow time to complete the consultation process to enable planning authorities to make a complete application decision, prior to allowing an applicant to appeal to the OLT.

## Expedited Approval Process for Community Service Facility Projects and Exempting Universities from the Planning Act

A new section of the *Planning Act* is proposed that will enable regulations to provide for the

non-application of any provision of the Act, or a regulation made under the Act, or for setting out restrictions or limitations, to prescribed classes of community service facilities that meet prescribed requirements. The proposal would apply to community service facilities, including an undertaking of a board defined under the *Education Act*, a long-term care home, and a hospital. Similarly, publicly assisted colleges and universities are proposed to be exempt from the *Planning Act* and planning provisions of the *City of Toronto Act, 2006* for university-led student housing projects on- and off-campus.

The Provincial Policy Statement, 2020 strictly prohibits institutional uses, including long-term care homes, hospitals, and schools, from being located in lands affected by natural hazards and where safe access through the hazard cannot be achieved. Any proposed regulatory exemptions or expedited approval processes must consider the Province's direction regarding natural hazards to ensure vulnerable populations or sensitive uses are not located in areas that pose an increased risk to life and property.

**Recommendation**
Amend the proposal to ensure any new regulation excludes institutional uses and student housing from hazardous lands and hazardous sites and where safe access through the hazard cannot be achieved, in accordance with provincial standards.

## Facilitating Standardized Housing Designs

A new section of the *Planning Act* is proposed that will enable regulations to establish criteria to facilitate planning approvals for standardized housing. The proposed changes would only apply to certain specified lands and would identify elements of the *Planning Act* and/or *City of Toronto Act, 2006* that could be overridden and/or certain planning elements that could be removed if the criteria are met.

Conservation Ontario recognizes the importance of establishing an expedited process for undertaking development of standardized housing; however, it must be provided in legislation that these projects be excluded from hazardous lands and hazardous sites, and in areas where safe access through the hazard cannot be achieved. This would further expedite approvals by only including sites that are safe to develop from a natural hazard perspective.

**Recommendation**
Amend the proposed legislative change so that any new regulation include criteria that standardized housing shall not be permitted in lands affected by hazardous lands and hazardous sites, and where safe access through the hazard cannot be achieved.

## Settlement Area Boundary Expansions

The Province proposes to allow applicants to appeal a municipality's refusal or failure to make a decision on privately requested official plan or zoning by-law amendments that would change the settlement area boundaries, outside of the Greenbelt Area. Conservation Ontario is concerned that proposals for settlement area boundary expansions would disregard or underestimate natural hazards, safe access, and sustainability of municipal

sources of drinking water; resulting in a lengthy appeal process initiated by municipalities or CAs.

**Recommendation**
That the proposal be amended to require expansion of settlement area boundaries to exclude hazardous lands and hazardous sites, lands where safe access through the hazard cannot be achieved, and where development should be restricted to protect the quality and quantity of drinking water supplies, in particular if impacting sustainability of municipal sources of drinking water.

Thank you for the opportunity to review and provide comments on Bill 185. Should you have any questions regarding the comments and/or recommendations in this letter, please contact Brandi Walter at bwalter@conservationontario.ca.

Sincerely,

*Brandi Walter*
Brandi Walter
Policy and Planning Liaison

*Leslie Rich*
Leslie Rich, RPP
Source Water Protection Manager

c.c. Conservation Authority CAOs / GMs

# REPORT 3429/24

| | |
|---|---|
| TO: | The Chair and Members of the Mississippi Valley Conservation Authority Board of Directors |
| FROM: | Sally McIntyre, General Manager |
| RE: | **Mississippi River Watershed Plan Public Advisory Committee - Appointment** |
| DATE: | July 3, 2024 |

**Recommendation:**

**That the Board of Directors appoint Bruce Moore to the Mississippi Watershed Plan Public Advisory Committee.**

---

In May 2022, the Board approved establishment of a Public Advisory Committee (PAC) to support implementation of the *Mississippi River Watershed Plan*.[1] Subsequently, a recruitment campaign was carried out that resulted in the appointment of the following applicants to the Committee in September 2022:

- Doreen Donald
- Ed Giffin
- Ken Grant
- Gordon Harrison
- Terry MacHardy
- Katie Surra

Unfortunately, Ken Grant recently submitted his resignation with regrets, but was able to recommend Bruce Moore as a potential successor. Mr. Moore has been the President of the North Frontenac Lake Association Alliance since 2014. The Alliance is a forum where 21 lake associations engage with other rural residents to educate and advocate for environmentally sustainable development including watershed protection and restoration and systems to promote and measure lake carrying capacity. Mr. Moore officially submitted his application to replace Mr. Grant on June 11, with the attached cv.

Ken Grant and Mr. Moore both applied as representatives of the Alliance. Staff find Mr. Moore's background experience and interest highly suitable, and recommend his appointment to the PAC.

[1] Refer to Report 3222/22.

**Bruce H. Moore** is a civil society activist, former United Nations Diplomat and NGO Executive Director. Most recently, Bruce has served on the Boards of Transparency International Canada; the Institute for Global Food Security at McGill University; Canadians for Tax Fairness, the Forum for Democratic Global Governance and the Huairou Commission, an international alliance of grassroots women's organizations. From 2013 in Moscow through 2018 he was a member of the C20, the civil society consultative body to the G20. He was the first Director of the Rome-based International Land Coalition from 1998-2008, a global alliance of civil society, UN and intergovernmental organisations working to enable poor rural families to gain their land and resource rights. Earlier, 1973 to 1998, he was a director with CHF Partners in Rural Development, a Canadian NGO in support of developing country farmer and rural peoples organizations. He has chaired the NGO Advisory Committee to the United Nations International Fund for Agricultural Development; served on the International Executive of the Society for International Development; chaired policy dialogues during the UN Commission on Sustainable Development; and served on the Commission on the Legal Empowerment of the Poor. Since 2014 Bruce has been the President of the North Frontenac Lake Association Alliance, a forum where 21 lake associations engage with other rural residents to educate and advocate for environmentally sustainable development including watershed protection and restoration and systems to promote and measure lake carrying capacity.

| REPORT | 3430/24 |
|---|---|
| TO: | The Chair and Members of the Mississippi Valley Conservation Authority Board of Directors |
| FROM: | Juraj Cunderlik, Director, Engineering |
| RE: | **Carp River Floodplain Mapping Update** |
| DATE: | July 3, 2024 |

**Recommendation:**

**That the Board of Directors:**

a) **adopt the report *Carp River Floodplain Mapping Update,* dated June 2024, and the associated GIS-based Regulation Limit lines and floodplain maps as the delineation of areas along the Carp River that are susceptible to flooding during the Regional flood standard as defined in Schedule 1 of Ontario Regulation 41/24, and**
b) **direct that the report, maps and Regulation Limit be used in the implementation of Ontario Regulation 41/24.**

## 1.0 BACKGROUND AND PURPOSE

The existing Carp River floodplain mapping was completed in 1983 and is more than 40 years old. Since 1983, the upper Carp River watershed underwent major urban development in Kanata and Stittsville. In addition, the Carp River Restoration Project transformed approximately 4 kilometres (km) of the river floodplain extending north from Hazeldean Road to Richardson Side Road, which is not reflected on existing floodplain maps. The 1983 also did not identify and map slope erosion hazard along the Carp River.

In co-operation with the City of Ottawa, the three conservation authorities: Mississippi Valley Conservation Authority (MVCA), Rideau Valley Conservation Authority, and South Nation Conservation (SNC) undertake five-year programs of updating flood hazard maps across the City of Ottawa. The Carp river was identified as a priority watercourse for a floodplain mapping update considering the existing mapping is not representative of the recent watershed changes.

A recently completed Flood Risk Assessment Study (2022) confirmed the Carp River as one of MVCA's highest flood mapping priority areas. In response, MVCA initiated this project to update the outdated regulatory hazard mapping that will help MVCA and our municipal partners understand flood and erosion hazards and implement effective mitigation strategies to reduce

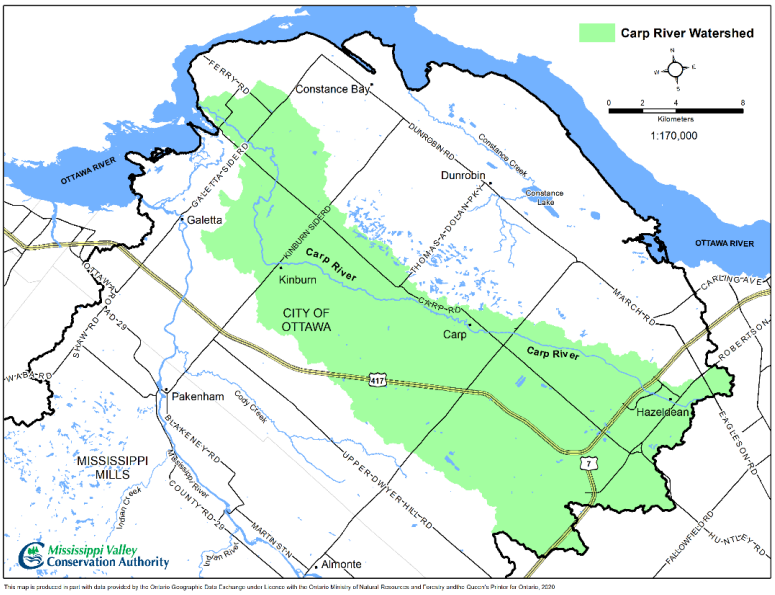
the impacts of flooding in the Carp River watershed. The mapping will also inform MVCA's flood forecasting and warning and emergency management programs.

The floodplain mapping project was completed in partnership and financial support from the City of Ottawa. The purpose of this report is to summarize the analysis and findings documented in the *Carp River Floodplain Mapping Update* report and to secure approval for updated regulatory limits. [1]

## 2.0 STUDY AREA

Located in the northwest end of Ottawa, the Carp River drains an area of approximately 295 km$^2$, before discharging into the Ottawa River at Fitzroy Harbour (see Figure 1). The watershed area is relatively flat and does not have any large water bodies. The upper watershed is largely developed while the lower watershed is mostly used for agricultural purposes. The major urban centres in the watershed include Kanata, Stittsville, Carp, Kinburn, and Fitzroy Harbour.

**Figure 1: Study Area**




The total length of Carp river is approximately 50 km. The study limits, for the production of floodplain maps, included the entire Carp River from Appaloosa Drive in Kanata to the confluence with the Ottawa River. Main tributaries of Carp River include Poole Creek, Feedmill Creek, Huntley Creek, Corkery Creek and Kinburn Creek. The tributaries were not mapped as part of

[1] Refer to the following SharePoint site for the engineering report and maps: Carp River FPM

this study; some were already mapped in previous studies (Poole, Feedmill and Huntley), other tributaries will be mapped in future floodplain mapping studies.

## 3.0 ANALYSIS AND FINDINGS

The engineering analysis and the regulatory floodplain maps were completed in accordance with provincial (MNR, 2002) and federal (NRCan, 2018-2022) floodplain mapping guidelines. The accompanying engineering report documents the technical work completed for this project. Major components of the project included:

- Preparation of topographic data based on *LiDAR for the City of Ottawa Mapping Program* (PHB, 2021).
- Bathymetric survey of the river channel (MVCA, 2020-2023).
- Confirmatory survey of the Carp River Restoration area (MP, 2022).
- Survey of 21 hydraulic structures (bridges, culverts)
- Hydrologic analysis to estimate flood flows for various return periods at key locations along the river system. This was completed using flood frequency analysis and HEC-HMS and PCSWMM hydrologic models.
- Hydraulic analysis using the HEC-RAS model to estimate flood levels associated with the flood flows.
- The delineation and plotting of flood lines on the topographic maps to define areas that are susceptible to flooding during the Regulatory (1:100 year) flood event and definition of the Regulation Limit based on provincial standards.

The study and deliverables underwent a 3rd-party independent technical review process supervised by the City of Ottawa with comments addressed and incorporated in the final report. The study report provides the technical basis for the associated maps defining areas subject to flood and erosion hazards along the Carp River, during a Regulatory (1:100 year) flood event. The final products of this project include the following:

1. The *Carp River Floodplain Mapping Update* report dated June 2024
2. Flood and erosion hazard limit lines in GIS format (shape files)
3. The HEC-HMS, PCSWMM and HEC-RAS model files
4. The mapping schedules (47 floodplain maps) prepared at a scale of 1:2,000.

The floodplain mapping results were reviewed to identify potential flood prone areas. The Carp River floodplain is predominantly located in rural areas (forests, wetlands and agricultural fields) downstream of Kanata and is located in an urban park corridor upstream of Richardson Sideroad. This results in few buildings or structures being located within the Regulatory (100-year) floodplain, despite the floodplain being very wide in sections, and running through the middle of a large urban development (Kanata). One residential dwelling was determined to be located in

the floodplain, with another three not having safe access. Three roads are overtopped during the 100-year event: two campground roads in Fitzroy Provincial Park and one rural road near Fitzroy. Affected properties, structures, and infrastructure are summarized in Table 1. A detailed assessment of flood prone areas can be found in Section 5.3 of the accompanying engineering report. Figure 2 provides an example of a floodplain map sheet produced in this project.

**Table 1: Summary of Affected Properties, Structures, and Infrastructure in Flood Prone Areas**

| Type of Affected Property | Count |
|---|---|
| **Total affected properties** | 637 |
| **Newly affected properties** | 29 |
| **Properties no longer affected** | 266 |
| **Dwellings within regulation limit** | 205 |
| **Dwellings in floodplain** | 1 |
| **Dwellings without safe access** | 4 |
| **Public roads in floodplain** | 3 |
| **Public roads without safe access** | 1 |
| **Bridges in floodplain** | 9 |
| **Bridges without safe access** | 9 |
| **Public places within regulation limit** | 15 |
| **Public places in floodplain** | 6 |
| **Public places without safe access** | 0 |
| **Businesses within regulation limit** | 15 |
| **Businesses in floodplain** | 1 |
| **Businesses without safe access** | 0 |
| **Emergency services within regulation limit** | 2 |
| **Retirement homes within regulation limit** | 2 |
| **Schools within regulation limit** | 2 |

## 3.0 PUBLIC CONSULTATION

A Public Open House was held on May 2, 2023 to present the draft floodplain maps to the public and answer questions. The Open House was advertised in the Community Voice (Kanata South and North), West Carleton Online, the Ottawa Sun, the Ottawa Citizen, Friends of the Carp website and on the MVCA website and social media platforms. Notification letters were mailed to all affected landowners. Draft floodplain maps were available on the MVCA website prior to the Open House. The draft maps were discussed with City's staff, developers, and active permit applicants. Fifty-eight (58) people attended the Open House. Comments raised by the public were addressed in the final report and floodplain maps.

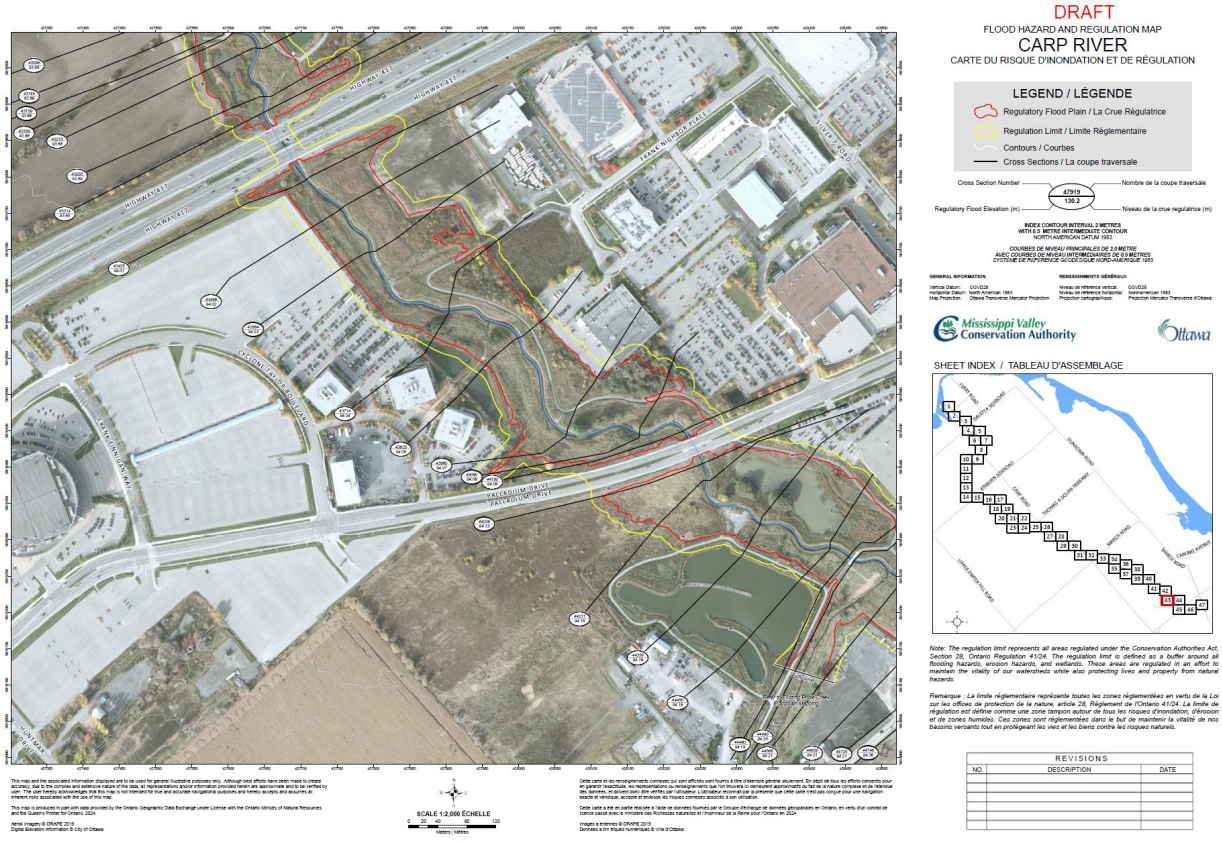
## 4.0 CONCLUSION & NEXT STEPS

The analysis documented in the *Carp River Floodplain Mapping Update* report meets the standards found in the *Technical Guides River & Stream Systems: Flooding Hazard Limit* and *Erosion Hazard Limit* (MNRF, 2002) and therefore, the resulting regulatory (1:100 year) floodplain and regulation limit delineation is suitable for use in MVCA's regulation mapping as well as for municipal land use planning purposes.

After the adoption by the MVCA Board of Directors the report, maps and regulation limit will be used in the implementation of Ontario Regulation 41/24 and forwarded to the City of Ottawa for inclusion in their municipal planning documents.

Upon approval, PDF copies of the maps will be made available for download from the MVCA website. The report and the model files will be available to the public upon request subject to the MVCA fee schedule and the acceptance of the standard "terms of use" that apply to the release of MVCA data and information.

**Figure 2: Floodplain Map**



# REPORT 3426/24

| | |
|---|---|
| TO: | The Chair and Members of the Mississippi Valley Conservation Authority Policy & Planning Committee |
| FROM: | Sally McIntyre, General Manager |
| RE: | **Land Conservation Strategy – Consultation Package** |
| DATE: | June 12, 2024 |

**Recommendation**

**That the Board of Directors approve release of the attached documents for public consultation in accordance with the Consultation Plan for development of a Land Conservation Strategy as set out in this report.**

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## 1.0 PURPOSE

The purpose of this report is to table draft documents that will inform and frame consultation with residents and stakeholders regarding the future acquisition, disposal, and use of lands by MVCA.

## 2.0 BACKGROUND

O. Reg. 686/21 under the *Conservation Authorities Act* requires MVCA to prepare a strategy that addresses the following matters:

- Objectives to inform decision-making related to the lands it owns and controls, including decisions related to policies governing the acquisition and disposition of such lands.
- Identification of the mandatory and non-mandatory programs and services on those lands.
- Where needed, an assessment of how those lands:
    - augment any natural heritage
    - integrate with other provincially or municipally owned lands

The above work is to include public engagement prior to approval of the Strategy by the Board.

## 3.0 CONSULTATION DOCUMENTS

Two documents have been prepared to support public engagement (see Attachments 1 and 2):

1. Discussion Paper

   The Discussion Paper provides key information and poses questions to obtain public input on matters related to:
   - What role should MVCA play in land conservation within its jurisdiction?
   - Should MVCA acquire more land for conservation purposes?
   - What type of facilities should MVCA operate?
   - What type of uses should MVCA permit at its Conservation Areas?
   - How should MVCA approach the acquisition and use of water control structures?

2. Current State Report

   This document is intended as a reference document, and provides more information regarding matters tabled in the Discussion Paper. It addresses not just MVCA assets but also the context within which MVCA plans and operates its facilities including:

   - pressures on the landscape from growth and the demand for recreational facilities,
   - others operating within the conservation, recreation, and cultural heritage space,
   - hydrologic and ecological values within the watershed, and
   - short and long-term management of water control structures.

   Note, staff are still reviewing the appendices, which will be finalized before the July Board meeting.

## 4.0 CONSULTATION PLAN

Staff have already begun engaging with member municipalities and key stakeholders regarding some of the key questions being considered during this project. To date:

- Briefings have been provided to the councils of North Frontenac, Mississippi Mills, and Lanark Highlands, to City of Ottawa staff, and to Lanark planners at their recent planning forum. Briefings are scheduled for the remaining seven municipalities and the counties of Lanark and Frontenac before the end of July.
- Briefing have been provided to representatives of the Ontario Federation of Agriculture, Ontario Woodlot Association, Climate Network Lanark, and Mississippi Madawaska Land Trust.

The following additional actions are planned:

- Formal circulation to all member municipalities and counties, Indigenous Communities, hydro producers, lake associations and community associations within the watershed for comment, and other key stakeholders (e.g. partners and adjacent landowners at our conservation areas.)
- Post the attached documents on the website.

- Promote the project using our email distribution list and through social media.
- Notices will be posted at all conservation areas and dams accessed by the public.
- Prepare and issue articles and press release for local print media.
- Engage with local radio stations (Lake 88.1 and Valley Heritage Radio).
- Host an on-line presentation and Q&A session in July, and post recording to website.
- Meetings with MVCA's Mississippi River Watershed Plan Public Advisory Committee (PAC) and Museum Advisory Committee (MAC).

## 5.0 NEXT STEPS

The above consultation period is to conclude the first week of September. Thereafter, staff will prepare a Draft Land Conservation Strategy for consideration at the October Board meeting. A Draft version of the Strategy will be posted for comment, and a final version tabled at the December Board meeting for approval.

## 6.0 CORPORATE STRATEGIC PLAN

Completion of the Land Conservation Strategy will support achievement of:

Goal 1: Asset Management – revitalize watershed management activities and invest in our legislated mandate; and objectives:

b) Strengthen our risk analysis and management capacity to include climate change and development impacts.

c) Implement priority actions identified in the *Mississippi River Watershed Plan*.

e) Plan for the next phase of asset development and management.

Goal 2: Community Building – engage local partners to foster connections, leverage our resources, and strengthen our "social license" to operate.

a) Demonstrate MVCA to be a trusted, client-centered, resourceful, and helpful partner.

b) Strengthen relationships with municipalities and community stakeholders, First Nations, the agricultural sector, developers, not-for-profits, and academia.

**Attachments:**

1. Discussion Paper
2. Current State Report

# Current State Report

# Land Conservation Strategy

Mississippi Valley Conservation Authority

July 2024

# MVCA Land Conservation Strategy: Current State Report

## Contents


*We can never have enough of Nature. We must be refreshed by the sight of inexhaustible vigor, vast and Titanic features, the sea-coast with its wrecks, the wilderness with its living and its decaying trees, the thunder cloud, and the rain which lasts three weeks and produces freshets. We need to witness our own limits transgressed, and some life pasturing freely where we never wander.*

*Henry David Thoreau*

# 1.0 Introduction

## 1.1 Purpose

Mississippi Valley Conservation Authority (MVCA) is preparing a Land Conservation Strategy to guide the acquisition, use, and disposal of land owned by MVCA, areas leased by MVCA, and land with easements or permits in favour of MVCA. The strategy will also facilitate coordination with other public agencies and NGOs, and inform delivery of stewardship programs to support private landowners. The Strategy is to be completed by the end of 2024 in accordance with O. Reg. 686/21.[1] This document is one of two that were prepared to support consultations in advance of drafting the strategy:

Discussion Paper

The Discussion Paper provides key information and poses questions to obtain comments regarding:

- What role should MVCA play in land conservation within its jurisdiction?
- Should MVCA acquire more land for conservation purposes?
- What type of facilities should MVCA operate?
- What type of uses should MVCA permit at its Conservation Areas?
- How should MVCA approach the acquisition and use of water control structures?

Current State Report

This document is intended as a reference document, and provides more information regarding matters outlined in the Discussion Paper. It addresses not just MVCA assets but also the context within which MVCA plans and operates its facilities including:

- regulatory jurisdiction and activities of others operating within the conservation, recreation, cultural heritage, and natural hazard management space,
- pressures on the landscape from growth and the demand for recreational facilities,
- hydrologic and ecological values within the watershed, and
- short and long-term management of water control structures.

## 1.2 MVCA's Land Interests

Over its 56-year history, MVCA has acquired and leased land and obtained easements for one or more of the following purposes:

- To preserve and manage natural heritage and/or cultural resources.
- To provide passive and/or active recreational opportunities for the public.
- To access, operate, maintain, rehabilitate and replace water control structures.
- To install erosion control structures.
- To install, operate, and maintain system monitoring equipment.
- To remove frequently and seriously impacted structures from the flood plain.

[1] https://www.ontario.ca/laws/regulation/210686

Today, MVCA:

- Owns and operates 12 water control structures
- Has contracts with the Ontario Power Generation (OPG) and the Ministry of Natural Resources (MNR) to operate a further 8 facilities
- Owns significant segments of the Carp River bed
- Owns and maintains 4 conservation areas
- Leases land for a further 2 conservation areas
- Owns several small waterfront properties on the Clyde River and Mississippi River
- Has easement and license of occupation agreements associated with the above properties and for numerous monitoring sites across the system

Interests in these properties largely occurred on an opportunistic basis and in response to requests from the province or a member municipality. While MVCA adopted an interim policy regarding property donations in 2016[2], there is no guiding master plan defining MVCA's land management role relative to other public, private, and civil society organizations, or that sets goals and objectives for:

- the development and management of conservation areas
- the development and management of facilities to manage natural hazards
- managing donations and sales offers for conservation lands, dams and other structures
- managing legacy assets that no longer align with recent provincial regulations[3]

A policy document is needed that informs the Authority's long-term vision for land ownership and management that addresses how land may be used to support delivery of the current mandate of conservation authorities, which is to:

- Identify and manage natural hazards (erosion, flooding, drought, and unstable slopes, soils and rock).
- Protect drinking water by supporting implementation of the *Clean Water Act*, 2006.
- Further the conservation, restoration, development and management of natural resources.

## 1.3 Strategic Planning Process

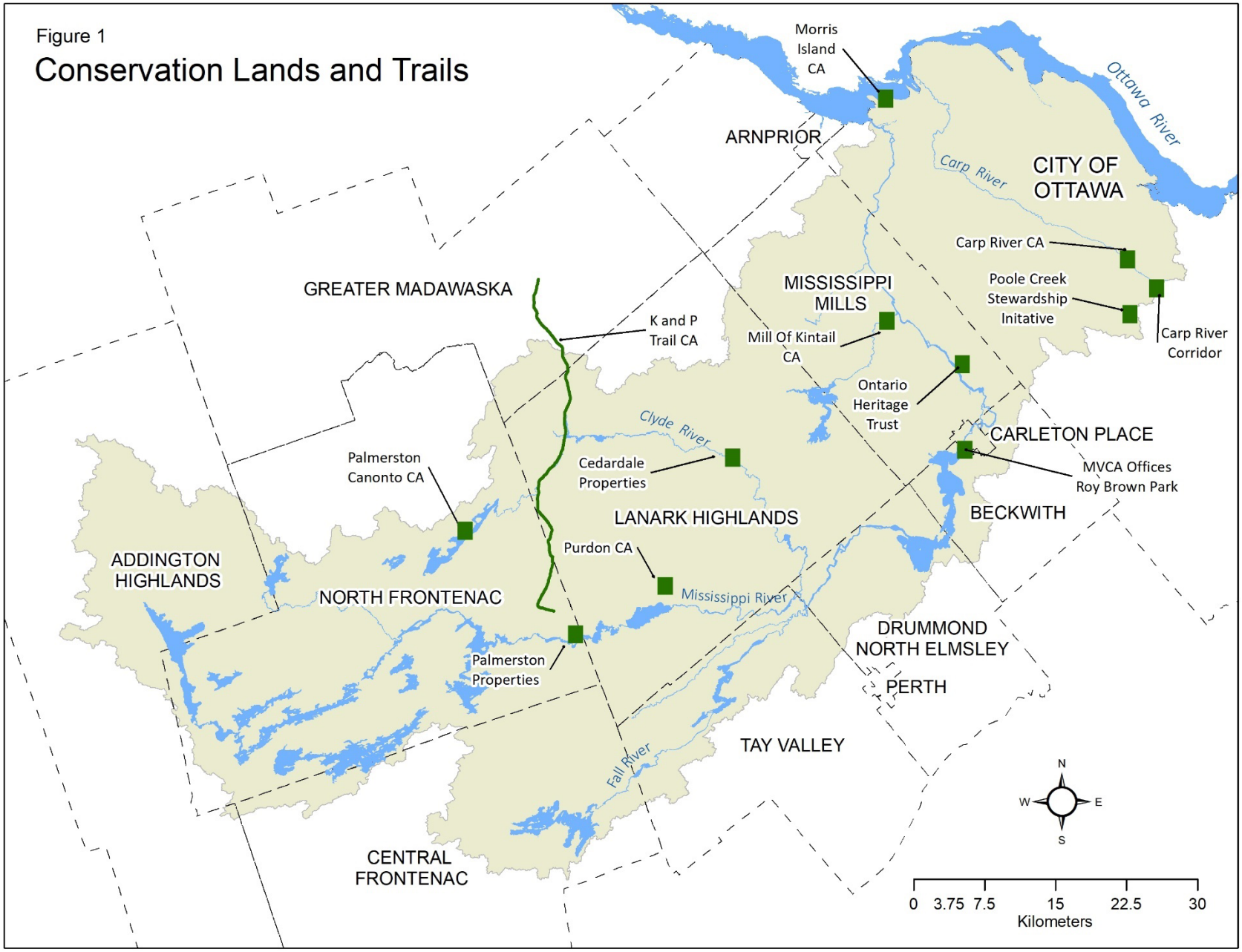
The Land Conservation Strategy is being developed in the following phases:

- February: An Asset Inventory was prepared that confirmed the scope of assets to be considered (refer to Figures 1 and 2).
- March-June: The Discussion Paper and Current State Report were prepared to support public engagement.
- July-August: Public Consultation regarding potential policy directions.
- September: The Land Conservation Strategy will be drafted.
- October: The Board of Directors will consider the Draft Strategy.
- October-November: Public Consultation regarding the Draft Strategy.
- December: The Board of Directors will consider the Final Strategy for approval.

[2] Refer to Minutes of April 2016 P&P Committee and approved by the Board of Directors May 2016.
[3] http://www.ontario.ca/laws/regulations/210687

Figure 1

## Conservation Lands and Trails



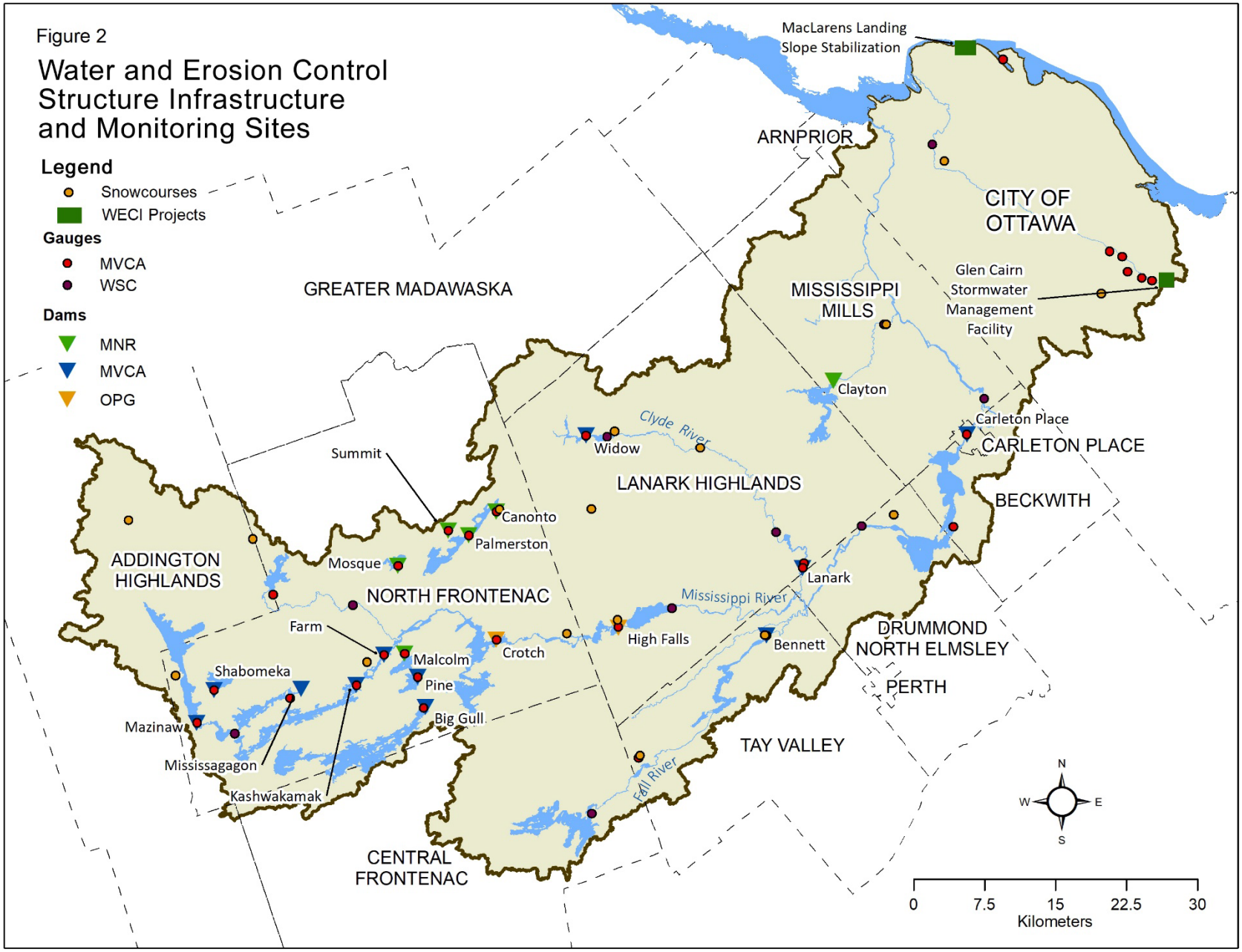


Figure 2
Water and Erosion Control Structure Infrastructure and Monitoring Sites
Legend
Snowcourses
WECI Projects
Gauges
MVCA
WSC
Dams
MNR
MVCA
OPG
MacLarens Landing Slope Stabilization
ARNPRIOR
CITY OF OTTAWA
GREATER MADAWASKA
MISSISSIPPI MILLS
Glen Cairn Stormwater Management Facility
Clayton
Carleton Place
CARLETON PLACE
Clyde River
Widow
Summit
LANARK HIGHLANDS
BECKWITH
Canonto
Palmerston
Mosque
ADDINGTON HIGHLANDS
NORTH FRONTENAC
Lanark
Mississippi River
Farm
Malcolm
Crotch
High Falls
Bennett
DRUMMOND NORTH ELMSLEY
Shabomeka
Pine
PERTH
Big Gull
Mazinaw
TAY VALLEY
Mississagagon
Kashwakamak
Fall River
CENTRAL FRONTENAC
N
W
E
S
0
7.5
15
22.5
30
Kilometers

# 2.0 MVCA Policy & Program Context

MVCA operates in accordance with a number of policy and planning documents, including:

- Corporate Strategic Plan & Implementation Plan: sets 5-year goals, objectives, and targets (2021-2025)
- 10-year Capital Plan: identifies major investments in conservation areas, dams, and other infrastructure required to support program delivery (e.g. fleet and computers).
- Master Plans for each of the conservation areas
- *Mississippi River Water Management Plan* (governs operations of key control structures in the watershed)
- Operational Plans for each of the water control structures that MVCA operates
- Stewardship Plan
- Natural Systems Monitoring & Reporting Plan
- Ice Monitoring Strategy
- Mississippi River Watershed Plan

The following are summaries of key MVCA policies and current conditions that influence land management decisions.

## 2.1 Mississippi River Watershed Plan

In 2021, MVCA approved a Watershed Plan for the Mississippi River system that was developed through consultation with watershed municipalities, as well as groups and individuals representing a broad cross section of interests. The Watershed Plan highlighted the importance of natural systems and functions provided by wetlands, forested areas, and groundwater recharge areas in mitigating both floods and droughts and building resiliency to climate change and development impacts. The Plan recommended 35 actions, including:

> *Develop a Land Conservation Strategy to mitigate flood, erosion and other natural hazards, and to support the ecological services provided by natural systems.*

MVCA's Land Conservation Strategy is being developed to meet the objectives set out in regulation and as conceived in the Watershed Plan.[4] Refer to Appendix A for other relevant watershed plan actions.

## 2.2 Existing Conservation Area Plans & Conditions

The following plans are in effect, but several are dated and require update.

- *Purdon Conservation Area Master Plan*, 1986
- *Morris Island Conservation Area Master Plan*, 1987
- K&*P Trail Conservation Area Management Plan*, 1991
- *A New Management Plan for the Showy Lady-slipper Orchid*, 2006
- *Mill of Kintail Master Plan*, 2011

[4] Though not an MVCA document, the Authority is also considering matters identified in the City of Ottawa's Carp River Watershed, completed in 2004.

- *Mill of Kintail Museum Strategic Plan,* 2019

The following property descriptions state whether there are "active" [5] recreational programs and services on site and, therefore, subject to a 5-year funding agreement with member municipalities. Refer to Appendix B for more details and a recent analysis of each site.

## Palmerston-Canonto Conservation Area (PCCA)

This was the first property purchased by MVCA to establish a conservation area. Bought in 1971, the site comprises trails, rest spots, and outhouses. There is no Master Plan on record, and there is no active recreational programming at this site. MVCA has a revolving 10-year lease agreement for the Township of North Frontenac to operate and maintain the property. At times, a local community group has also supported site maintenance; and MVCA has carried out stewardship projects with area residents to enhance the beach. The Township of North Frontenac has a standing agreement with MVCA to acquire the beach once property ownership matters with adjacent owners are resolved. There is a history of unauthorized use of an old sand pit on the property.

## Mill of Kintail Conservation Area (MOK)

This property was purchased in 1972 and comprises trails, meeting facilities, a museum, parking, and washrooms, and hosts a combination active and passive programs and services. Specifically, the Museum, Gate House, Education Centre, Picnic Shelter, and Cloister are Category 3[5] structures, and the services offered in association with them defined as active recreation.

MVCA has a 5-year agreement with its member municipalities to continue to support delivery of Category 3[5] programs and services at this site. MVCA also receives annual grants from the province and from the Municipality of Mississippi Mills to support museum operations, however, neither grant has been adjusted over time to address the impacts of inflation or can be relied upon in the long-term. Similarly, it cannot be assumed that other municipalities will continue to support delivery of Category 3 programming at this site when the current agreement expires.

Update of the MOK Master Plan is needed to address the new funding model and the outcome of this Land Conservation Strategy project. Update of the MOK Museum Strategic Plan is to be completed this year.

## Purdon Conservation Area (PCA)

This property was bought in 1988 and has no active recreational programming at this site. The property comprises trails, lookouts, parking lots, and outhouses. The Showy Lady-slipper orchids at PCA live in a constructed habitat that was developed by the previous owner Joe Purdon. MVCA is currently in discussions with subject matter experts to discuss how to manage the site over the next 10-15 years to improve orchid health and abundance.

[5] A site is considered to provide active recreational programs and services if they require a staff member to be present on site or involve structures that do not meet provincial regulatory definitions/limits. Passive recreational (Category 1) programs and services are fundable by the Municipal Levy. Active recreational (Category 3) programs and services must be self-funded or be subject to an agreement with one or more municipalities for financial support.

## K&P Trail (K&P)

The decommissioned rail trail was bought by MVCA in 1990. There is no active recreational programming at this site. MVCA acquired ~35 km of the K&P Trail from the Agricultural Rehabilitation and Development Directorate of Ontario (ARDA), a division of the former Ontario Ministry of Agriculture & Food (OMAF) on an as-is basis. Currently, much of the trail is in rough condition and cannot be accessed by cars during certain times of year. MVCA is working with the counties of Lanark, Renfrew, and Frontenac to transfer ownership of the trail so that it can be brought up to the same standard as, and integrated with other county rail trails. Survey work and several quit claims will be required to enable land transfer under the *Land Titles Act*.

Safety barriers on the bridge over the Clyde River were replaced in partnership with the Snow Road Snowmobile Club the winter of 2021-22, and MVCA enters into an annual agreement with the Club to permit winter grooming along MVCA's section of the trail. Additional works at the bridge are required, and speed and weight limit are in effect until those works are completed.

Over the years, MVCA has issued Temporary Use Permits to lumber companies to use the trail to access woodlots (Crown and private). Companies are required to reinstate the trail to equal or better condition.

MVCA prohibits the creation of new entrances along the trail and, in particular, land severances that assume vehicular access from those property to the trail.

## Morris Island Conservation Area (MICA)

This site was developed in partnership with the City of Ottawa in the 1980s and comprises trails, a parking lot, and washrooms, and provides passive recreational opportunities only.

The south half of this property is owned by the City of Ottawa and the shore lands by OPG. MVCA and the City of Ottawa have a joint 10-year lease agreement with OPG to use its property for the conservation area. MVCA has a separate 5-year License Agreement with the City of Ottawa to operate and maintain the conservation area on these lands. Rotating leases have been in effect since the late 1980s.

MVCA regularly allows research and habitat enhancement projects to occur at this property. At times there have been challenges with unauthorized use of the property that have required enforcement action. Historically, residents in the adjacent community supported maintenance and operation of the washrooms, however that ceased during COVID.

## Carp River Conservation Area (CRCA)

This site was developed as part of the Carp River Restoration Project[6] and is owned by the City of Ottawa. MVCA's 5-year License of Occupation only provides for naming rights and limited rights to develop educational and conservation structures (e.g. signage and viewing stations) and to host educational events without need of a permit. Currently, the site has a paved walkway, with signs and habitat enhancements such as an osprey tower installed by MVCA with the support of the MVC Foundation.

[6] https://friendsofthecarpriver.com/carp-river-restoration-area-2016-present/

In 2022, MVCA prepared a Background Report to support development of a Master Plan for the site. The City of Ottawa has agreed that development of a Master Plan is desirable, but has been unable to dedicate resources to that work.

### Other Conservation Lands

There is no policy framework to direct management of vacant properties in MVCA's portfolio and only an interim policy governing the acquisition of new land. Some properties were divested or decommissioned following provincial funding cuts in the mid-1990s[7] and no further acquisitions were made since. Currently, any offers to acquire new properties through donation or purchase are assessed and referred to the Mississippi Madawaska Land Trust, Ontario Heritage Trust, or to the local municipality. A recent offer to purchase a vacant MVCA property has been deferred until the Land Conservation Strategy has been completed.

## 2.3 Existing Water & Erosion Control Structures

During its first two decades, MVCA built or assumed ownership of the following water control facilities, largely in response to requests and recommendations from the province and member municipalities:

Carleton Place Dam: acquired from Ontario Hydro at its request in 1973 following dam restoration. Today, the primarily function of the dam is to maintain recreational water levels on Mississippi Lake and secondarily for flood control and maintaining levels for the Town's and private surface water intakes.

Widow Lake Dam: rebuilt defunct dam and acquired adjacent property from a private owner in 1974. Today the dam is used primarily for flood mitigation and secondarily to provide fish spawning habitat.

Bennett Lake Dam: built and acquired in 1975 at the request of Tay Valley Township and the local cottage association to maintain recreational water levels.

Farm Lake Dam: rebuilt and acquired by MVCA in 1976 at the request of North Frontenac Township to maintain recreational water levels on Farm Lake.

Lanark Dam: rebuilt and acquired by MVCA in 1977 at the request of Lanark Highlands Township. Today the primary function of the dam is for flood mitigation and secondarily to maintain recreational water levels on Kerr Lake.

Glen Cairn Flood Control Facility: constructed by MVCA in 1979 at the request of the province and the former City of Kanata to address flooding of Glen Cairn subdivision.

Pine Lake Dam: built and acquired by MVCA in 1990 at the request of North Frontenac Township. Today the dam's primary function is to maintain recreational water levels on the lake, and secondarily for flood mitigation.

[7] Riverside properties at Five Arches Bridge and at Gemmill Park in Mississippi Mills were sold; and picnic and campsites along the K&P were decommissioned.

MVCA subsequently agreed to assume ownership of five dams in 1990 from the Mississippi River Improvement Company (MRIC)[8]. All are located in North Frontenac Township, provide reservoir capacity in the upper watershed, and are managed in accordance with *Mississippi River Water Management Plan (MRWMP)*[9]:

- Shabomeka Lake Dam
- Mazinaw Lake Dam
- Kashwakamak Lake Dam
- Big Gull Lake Dam
- Mississagagon Lake Dam

Most ownership and easement documents related to MVCA's 11 dams and the Kanata detention pond do not include registered reference plans completed by a licensed surveyor. MVCA began discussions with the Township of North Frontenac in 2020 to resolve easement matters in proximity to the Shabomeka and Mazinaw dams. Work has begun to confirm access rights in proximity to Kashwakamak and Lanark dams for works planned in 2025-26.

Most control structures provide for the raising and lowering of water levels on the lakes, with implied flooding rights on all affected shoreline properties. There may be a need to adjust upper and lower levels in future depending upon how the impacts of climate change affect weather patterns and natural hazards.

MVCA relies upon 50% funding from the province to complete major studies and capital works at most of its dams. Dams that primarily operate for flow augmentation (as opposed for flood control) tend to score lower and are less likely to receive funding during the annual call for grant applications. The province does not provide funding for new structures unless they replace or allow for the replacement of an existing structure.

Currently, MVCA has agreements to operate six MNR dams[10] and 2 OPG dams[11], however the scope of those contracts have evolved over time.

MVCA also supported the former West Carleton Township with a major erosion control project on the Ottawa River in the community of McLaren's Landing. There appear to be residual easement rights on some but not all of the residential waterfront properties.

The following structures are discussed in greater detail due to ongoing or short-term initiatives.

## Shabomeka Lake Dam

An as-built survey was completed post reconstruction of the dam embankments and installation of the safety boom to delineate the extent of MVCA land interests and in fulfillment of an easement agreement with the Township of North Frontenac.

[8] Ontario Hydro had a controlling interest in MRIC at the time of the sale.
[9] This a pprovincially approved document that governs dam operations and sets target water levels on specified lakes.
[10] Mosque, Summit, Palmerston, Canonto, Malcom, and Clayton lake dams.
[11] Crotch and High Falls dams.

MVCA currently in discussions with Ontario Parks regarding reinstatement of the historic portage route along the south side of the dam structure.

### Mazinaw Lake Dam

Registered Plan delineating MVCA easements were approved by former Barrie Township but never registered on title. In June 2020, the Township of North Frontenac agreed to enter into an easement agreement and to have legal plans registered on title. Work on this stalled during COVID and needs to resume.

### Kashwakamak Lake Dam

Replacement of the dam is planned for 2026-27. Clarification of ownership and easement rights is ongoing in support of replacement of this structure in 2026.

### Lanark Dam

Clarification of ownership and easement rights has commenced in support of capital improvements planned for 2025.

### Glen Cairn

The City of Ottawa has an agreement with MVCA to operate this facility on behalf of the Authority. The City has informed MVCA of encroachments (unapproved trails) on both City and MVCA lands in the vicinity of Nairn Park in the adjacent Glen Cairn subdivision. MVCA and the City will be collaborating to resolve encroachments while determining how best to address the linear pathway needs of the community.

### Widow Lake

The property west of the dam is privately owned and there are access rights across the dam that have been challenging to manage, particularly as the dam has deteriorated. There are also water control issues at this site to be examined that may affect the future design and location of this dam.

## 2.4 10-year Capital Plan

The focus of the MVCA's Capital Plan is on maintaining and replacing existing assets only. It does not provide for the acquisition of new properties or the creation of new assets (dams or conservation areas.) There is no reserve fund for the acquisition of land. See Table 1 for excerpts from the most recent 10-year Capital Plan.

Each year, MVCA updates a needs-risks matrix to support project prioritization, financial planning, and update of the 10-year Capital Plan. Prioritization of works at dams is based upon annual inspections and a variety of studies including Dam Safety Reviews (DSRs) and Condition Assessment Reports. At conservation areas, the investigation of specific assets such as the museum roof and gate house stone work are used to inform annual work plans and capital planning.

An Asset Management Strategy is to be prepared in 2024 for all water and erosion control structures in accordance with O. Reg. 686/21, which will be used to inform future updates of the 10-year Capital Plan. The Strategy will be drafted to allow for its expansion to include conservation areas and other assets over time. Ultimately, the Capital Plan could provide for a sinking fund for future acquisitions.

# Table 1: MVCA 10-year Capital Plan (Structures & Conservation Areas)

| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 10 Yr Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Water Control Structures** | | | | | | | | | | | |
| Shabomeka Lake Dam | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $35,178 | $36,936 | $155,133 | $227,247 |
| Mazinaw Lake Dam | $0 | $0 | $0 | $0 | $0 | $0 | $100,507 | $35,178 | $147,746 | $0 | $283,430 |
| Kashwakamak Lake Dam | $120,000 | $115,500 | $110,250 | $173,644 | $3,152,719 | $3,310,355 | $0 | $0 | $0 | $0 | $6,982,468 |
| Big Gull Lake Dam | $0 | $0 | $0 | $0 | $0 | $0 | $100,507 | $35,178 | $147,746 | $0 | $283,430 |
| Mississagagon Lake Dam | $0 | $5,250 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $5,250 |
| Farm Lake Dam | $0 | $0 | $11,025 | $0 | $0 | $0 | $0 | $0 | $73,873 | $775,664 | $860,562 |
| Pine Lake Dam | $0 | $5,250 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $5,250 |
| Carleton Place Dam | $280,000 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $280,000 |
| Lanark Dam | $0 | $78,750 | $27,563 | $115,763 | $0 | $0 | $0 | $0 | $0 | $0 | $222,075 |
| Widow Lake Dam | $0 | $78,750 | $55,125 | $405,169 | $0 | $0 | $0 | $0 | $0 | $0 | $539,044 |
| Bennett Lake Dam | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $105,533 | $36,936 | $155,133 | $297,602 |
| Glen Cairn Detention Basin | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| MacLarens Landing | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Project Management | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Preventative Maintenance | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Proposed Debt Repayment | $35,412 | $35,412 | $35,412 | $35,412 | $77,340 | $77,340 | $77,340 | $77,340 | $77,340 | $95,046 | $623,394 |
| **Subtotal** | **$435,412** | **$318,912** | **$239,375** | **$729,987** | **$3,230,059** | **$3,387,695** | **$278,354** | **$288,405** | **$520,577** | **$1,180,976** | **$10,609,752** |
| **Conservation Areas** | | | | | | | | | | | |
| Mill of Kintail - Visitor Services | $113,500 | $0 | $22,050 | $0 | $60,775 | $31,907 | $13,401 | $84,426 | $0 | $0 | $326,059 |
| Mill of Kintail CA | $30,000 | $97,350 | $16,538 | $11,576 | $0 | $0 | $0 | $0 | $14,775 | $0 | $170,238 |
| Purdon | $18,000 | $66,675 | $31,421 | $11,576 | $12,155 | $21,697 | $0 | $0 | $0 | $23,270 | $184,794 |
| K&P Trail | $0 | $2,100 | $2,205 | $2,315 | $8,509 | $40,841 | $2,680 | $2,814 | $0 | $0 | $61,464 |
| Morris Island | $5,000 | $15,750 | $11,025 | $11,576 | $12,155 | $0 | $0 | $7,036 | $29,549 | $7,757 | $99,848 |
| Roy Brown Trail | $0 | $21,000 | $5,513 | $5,788 | $6,078 | $0 | $0 | $7,036 | $0 | $7,757 | $53,170 |
| **Subtotal** | **$166,500** | **$202,875** | **$88,751** | **$42,832** | **$99,672** | **$94,445** | **$16,081** | **$101,311** | **$44,324** | **$38,783** | **$895,574** |
| **TOTAL** | **$601,912** | **$521,787** | **$328,126** | **$772,819** | **$3,329,731** | **$3,482,140** | **$294,435** | **$389,716** | **$564,900** | **$1,219,759** | **$11,505,326** |

# 3.0 Municipal Policy & Program Context

## 3.1 Parks & Recreation

Most municipalities within MVCA's jurisdiction have policies related to the provision of pubic open space, active recreational facilities, and community meeting space within their Strategic Plans, Official Plans or Parks & Recreation Plans. Common themes amongst municipal policy documents in MVCA's jurisdiction include the following:

- Support active living regardless of age and ability (including providing fully accessible sites)
- Provide safe, efficient and enhanced recreational facilities, trails and parks
- Maintain and increase public access to waterbodies
- Expand local trail network and increase connectivity to other trails and recreational sites (e.g. Trans Canada Trail, Rideau Trail, Glen Tay to Havelock Trail, Provincial Parks)
- Develop a land acquisition policy
- Develop a Parkland classification system
- Employ shared-service delivery for cost efficiency
- Develop cash-in-lieu
- Protect the natural environment, rural integrity, and manage the impacts of climate change

All municipalities in the watershed have local parks and some have linear trails and/or operate boat launches. However, there are relatively few large municipal properties dedicated to conserving natural heritage values and providing passive recreation within the watershed. Notable exceptions *within* the watershed include:

- Blakeney Park and Gemmill Park in Mississippi Mills
- Pinewood Memorial Forest in Drummond North Elmsley
- Mississippi Riverwalk Trail, Carleton Place
- Carp Hills Nature Reserve and trails, Torbolton Forest, Trillium Woods, South March Highlands Conservation Forest, Sheila McKee Park, Kizell Wetland, and Kemp Woodland in the City of Ottawa.[12]
- The partnership between North Frontenac and MNR to operate and maintain campsites on Crown land in the vicinity of Crotch Lake.

Some municipalities own community facilities and rent or lease them to community groups such as McDonald's Corners and Elphin Recreation and Arts in Lanark Highlands. In other cases, community facilities are owned, operated and maintained by local volunteer organizations such as McDonald's Corners Agricultural Hall.

## 3.2 Heritage Facilities

There are eight heritage facilities in the watershed: MVCA's Mill of Kintail Museum, the Central Frontenac Railway Museum, Archives Lanark, Pinhey's Point Historic Site, the Carleton Place and Beckwith Heritage Museum, Middleville & District Museum, the North Lanark Regional Museum, and the Mississippi Valley Textile

[12] Refer to Appendix E for details.

Museum. While some are located on municipally-owned land, all except the MOK Museum are operated by the Ontario Heritage Trust or local civic organization, often by volunteers or part-time employees.

In addition to land and facility-space, some municipalities also provide grants to heritage organizations. In recent years, MVCA has received a grant from the Municipality of Mississippi Mills that has supported the hiring of students to help operate the museum (~6.5 % of the annual budget).

The MVCA service delivery model is unique within the watershed in that the museum is not managed by an independent board with its own financial accounting. While the MOK museum also relies on user fees and donations to support operations, museum staff are employees of MVCA and approximately 37.5 % of the annual museum operating budget is secured through a 5-year agreement with the 11 municipalities in the watershed.

## 3.3 Natural Heritage & Natural Hazard Lands

Municipalities play an important role in natural hazard management and the protection of natural heritage values. Through recent changes to the Ontario Wetlands Evaluation System in 2022[1] the technical review of wetland assessment in support of their classification and declassification was transferred to municipalities. And, municipal official plans and zoning by-laws are required to control development on or adjacent to natural heritage and hazard areas, with most municipalities within MVCA's jurisdiction requiring the following:

**Development Setbacks**:

- Generally 30 m from the highwater mark
- 30-120m from a provincially significant wetland
- No development within natural hazards or Provincially Significant Wetlands

**Vegetative Buffers:**

The retention and/or establishment of mature tree cover and native shrubs and vegetative cover on lands within 15 m of a highwater mark of a water resource. Municipal policies generally allow/require the following:

- A single access corridor, commonly 9 m or greater in width passing through the natural vegetated buffer to provide access between the main use of the land and the waterfront activity area;
- A pathway within the access corridor not greater than 2 metres in width is permitted provided it is constructed of permeable material. Permeable materials include permeable interlocking concrete pavers, plastic or concrete grid systems, decking, or material deemed satisfactory to the Township;
- Stairs for access to the shoreline are permitted with a maximum width of 2 metres;
- Pruning of trees for viewing purposes is permitted;
- Removal of dead or diseased trees for safety reasons is permitted;
- Stumps should be retained wherever possible;

[1] https://www.ontario.ca/files/2023-02/mnrf-pd-rpdpb-ontario-wetlands-evaluation-system-southern-manual-2022-en-2023-02-02.pdf

- Clearcutting is prohibited in this area; however selective cutting is permitted in the area commencing at a point 15 metres inland from the high water mark up to 30 metres from the highwater mark;
- Additional tree removal shall only be permitted where trees are marked for removal by a Licensed Tree Marker, Registered Professional Forester or Certified Arborist.

Policies vary amongst municipalities based upon the degree to which natural heritage systems have been studied and there is support their protection through regulation. Regardless of the degree of regulation, these types of policies allow municipalities to mitigate runoff, erosion, and the degradation of water quality while maintaining wildlife habitat around lakes and along shorelines.

Some municipalities use significant natural areas and hazard lands to create passive trail systems such as the linear Mississippi Riverside Park in the Town of Carleton Place and South March Highlands Conservation Forest in the City of Ottawa. Similarly, this was a key objective during development of the Carp River Restoration Plan that saw areas north and south of Hwy. 417 designed for passive recreational use during planning of the new riverine and stormwater management system.

Municipalities may request the submission of a lake capacity study to determine if phosphorous levels meet or exceed provincial water quality guidelines (see section 5.1.) The following lakes in MVCA's jurisdiction are designated as "at capacity" within the municipal official plans: Buckshot, Kishkebus, Little Green, Mosque, Shabomeka, Sharbot (West Basin), and Silver.

Finally, municipalities play an important role in protecting wildlife corridors through the planning and construction of roads. Wildlife-Vehicle Collisions (WVCs) have significant socio-economic, traffic safety and environmental costs. In 2012, costs were estimated to be as high as $200 million annually, and were rising as Ontario's road network increased. Municipalities help to mitigate one of the largest causes of wildlife mortality and motor vehicle accidents by ensuring that wildlife barriers and crossings are provided during new construction.[13]

## 3.4 Municipal Shoreline Allowances

In the 1950s, the Province subdivided and sold waterfront cottage lots throughout the region, and transferred a 20-metre wide shore road allowance around many lakes to municipalities to provide for shared lake access. Some municipalities allow adjacent landowners to purchase "shore road allowance" to connect their private cottage lots to the shore.

This practice is problematic where lots abut a lake that is subject to water level changes due to dam operations. MVCA has implicit flood rights associated with the Mississippi River Water Management Plan and the extent to which municipalities allow the sale and encroachment onto the shoreline allowance may constrain system operations and adaptation of operations to address the impacts of climate change.

Depending upon the location and scales of these sales, they can impede public access to public water bodies, compromise opportunities for future linear pathways, and impact shoreline habitat and access by wildlife.

[13] Source: https://tirf.ca/wp-content/uploads/2017/01/WildlifeVehicle_Collision_Deliverable1_Eng_6.pdf

## 3.5 Stormwater Infrastructure

Generally, municipalities in Eastern Ontario do not own or operate riverine flood control structures such as those operated by MVCA. Historically, that was not the case, and some of MVCA's structures were acquired from local municipalities. Today, municipalities primarily own and operate stormwater facilities and maintain roadside ditches and culverts. They are also responsible for the maintenance and management of communal agricultural drainage systems approved under the *Drainage Act*. Changes in the design, construction and maintenance of those facilities can impact receiving streams, waterbodies, and MVCA facilities. For this reason, MVCA reviews and in some cases requires permits under the *Conservation Authorities Act* for the construction, alteration, and decommissioning of stormwater infrastructure.

### Surface versus Riverine Flood Management [14]

*SURFACE* flooding occurs when large storms exceed the capacity of a community's drainage system[15] to convey water, and can result in flooding of streets and low-lying areas. This type of flooding can be far removed from a creek or waterbody and have limited relationship to water levels on lakes and rivers. For example, a community that experiences a summer thunder storm can have significant surface flooding while nearby lakes and rivers are at their lowest levels.

Surface flooding is more common in older communities that were not designed to today's standards or that relied on creeks and other drainage pathways that no longer exist. Municipalities are responsible for ensuring that new developments are graded and have *stormwater management* controls to manage frequent wet weather events.

*RIVERINE* flooding occurs when rivers and streams exceed the capacity of their channels to convey flows, resulting in water overtopping the banks and flowing into adjacent areas. This typically occurs where there has been inappropriate filling and/or development of low-lying areas such as the draining and development of wetlands, and an increase in impervious surface area that is not adequately mitigated by stormwater management practices. It is MVCA's responsibility to mitigate riverine flooding by controlling development that would limit a river's ability to function as a dynamic system and convey water without damage to nearby buildings and infrastructure during major weather events.[16]

# 4.0 County Policy & Program Context

## 4.1 Trails & Forests

The counties of Lanark, Frontenac, and Renfrew have a shared interest in developing former rail beds into an integrated high-quality trail network. In Lanark County, a Trails Sub-Committee was established to manage,

[14] Source: https://wiki.sustainabletechnologies.ca/wiki/Flood_mitigation#Pluvial_.28Surface.29_flooding
[15] Stormwater, combined, and partially separated sewer pipes, manholes, roadside ditches, ponds and pump stations.
[16] MVCA is mandated to control development to help ensure that riverine systems can convey a 1:100-year regulatory flood event with reduced impacts on human life and natural and built infrastructure. The building of retaining walls and filling of flood plains are examples of structures/activities that prevent a river system from operating effectively as a dynamic system.

plan, and coordinate development of a sustainable and environmentally responsive trail network.[17] Key elements of the existing rail trail network include:

- Ottawa Valley Recreational Trail (OVRT) – 296 km running from Smiths Falls to Renfrew to Mattawa
- K&P Trail – 180 km between Kingston and Renfrew
- Central Frontenac Trailway – 46 km running west-east through the Township to Fall River Road
- Tay-Havelock Trail – 25 km between Glen Tay and Fall River Road
- Ottawa-Carleton Trailway – 23 km between Ottawa and Highway 7
- Carleton Place Trailway – 6 km between Highway 7 and Carleton Place

Not all of these trails are owned by the counties, and as noted previously, MVCA is in discussions with the three counties to sell its section of the K&P Trail.

Both the counties of Lanark and Renfrew have extensive managed forest properties. Lanark County has just over 4,000 ha of forests within MVCA's jurisdiction, and developed and maintains a short trail system through the Baird forest near Lanark Village with the support of community volunteers. MVCA plans and administers harvesting at Lanark County forest sites.

## 4.2 Natural Heritage & Stormwater Management

All counties[18] have a role in land use planning approvals and have policies governing the protection of natural heritage features, mitigation of natural hazards, and stormwater management. Because many small municipalities have insufficient resources to undertake comprehensive studies, some counties have completed or begun work on Natural Heritage studies to support lower tier planning and the identification and protection of lakes and river corridors, wetlands, forests, and ANSIs within their jurisdiction. Both the counties of Lennox & Addington and Frontenac have completed these studies, and the County of Lanark has begun work on this.

Most counties also have a role in stormwater management as it relates to development approvals falling within their jurisdiction. For example, most applications for subdivision approval are administered at the county level, which assume responsibility for ensuring appropriate stormwater design and management on behalf of the local municipality. Generally, the local municipality will assume responsibility of stormwater infrastructure after the planning approvals are complete.

Like municipalities, county governments play an important role in protecting wildlife by implementing wildlife barriers and crossings into the design and construction of roadways.

[17] Source: https://www.lanarkcounty.ca/en/county-government

[18] While the counties of Frontenac and Lanark lie almost entirely within the jurisdiction of one or more conservation authorities, the northern quadrant of the County of Lennox and Addington (L&A) as well as almost the entirety of Renfrew County do not. Consequently, Renfrew County and areas of L&A consult with MNR rather than the conservation authority for the management of natural hazards.

# 5.0 Provincial Policy & Program Context

## 5.1 Land Conservation

The Province of Ontario is involved in land conservation and resource management in a number of capacities, including:

- Setting land use planning laws, policies and guidelines
- Protecting species at risk
- Supporting the evaluation of lake carrying capacity
- Ownership and management of Crown Land
- Negotiation with Indigenous Peoples in the resolution of land claims
- Administration of Tax Incentive Programs
- Forestry and Fishing

### Land Use Planning

The Ministry of Municipal Affairs and Housing (MMAH) is responsible for administration of the *Planning Act*, which includes development of provincial policy and guidelines related to its implementation. Recently, the province amended the Ontario Wetland Evaluation System document that altered scoring systems and methodologies. This has and will have a profound impact on the protection of wetlands in Ontario. Currently, the *Provincial Policy Statement*[19] is under review with further changes anticipated[20] that may impact the conservation of land and natural resource management.

### Species at Risk

The provincial *Endangered Species Act*[21] is designed to identify and protect species at risk as well as the habitats they occupy. Implementation of the *Planning Act* is tied to this legislation through requirements for landowners to carryout site-specific investigations to determine the presence of species at risk and their habitats, and to take appropriate mitigating measures.

### Lakeshore Capacity Assessments

The province developed a model and guidebook[22] to support municipalities in carrying out lakeshore capacity assessment of inland lakes on Ontario's Precambrian Shield. The objective of the tool is to limit the release of phosphorus to inland lakes on the Precambrian Shield by controlling shoreline development. High levels of phosphorus in lake water promotes eutrophication — excessive plant and algae growth, resulting in a loss of water clarity, depletion of dissolved oxygen and a loss of habitat for species of coldwater fish such as lake trout. These studies are typically undertaken in association with large development proposals.

[19] https://files.ontario.ca/mmah-provincial-policy-statement-2020-accessible-final-en-2020-02-14.pdf
[20] https://ero.ontario.ca/notice/019-8462
[21] https://www.ontario.ca/laws/statute/07e06
[22] https://www.ontario.ca/document/lakeshore-capacity-assessment-handbook-protecting-water-quality-inland-lakes

## Crown Lands

The province owns ~1,125 km$^2$ of Crown land within MVCA's jurisdiction or approximately 26% of the watersheds. Most Crown land is located in the headwaters of the Mississippi River with fewer parcels located in lowlands area off the Shield.

Crown land includes large tracts of natural land, shore lands and the beds of most lakes and rivers that are managed under the *Public Lands Act*[23] by the Ministry of Natural Resources (MNR). Individual sites are managed in accordance with a land use policy report/plan with varying levels of detail and land preservation. There are six crown land use designations[24]:

1. Recommended Provincial Park – once designated, an area can be regulated as a provincial park under the *Provincial Parks and Conservation Reserves Act.*[25] Some subclassifications (e.g. recreation) permit a broad range of activities while other subclassifications (e.g. nature reserve and wilderness) have a narrower range of permitted activities. There are five Provincial Parks in MVCA's jurisdiction: Bon Echo (natural environment), Sharbot Lake (recreational), Silver Lake (recreational), Fitzroy (recreational) and Burnt Lands (nature reserve).

2. Recommended Conservation Reserve - once designated, an area can be regulated as a conservation reserve under the *Provincial Parks and Conservation Reserves Act* (PPCRA). There is one existing and one proposed reserve in MVCA's jurisdiction: Hungry Lake Conservation Reserve and the proposed Crotch Lake (Whiteduck) Reserve.

3. Forest Reserve – are protected for their natural heritage and special landscapes where there is a pre-existing interest or tenure under the *Mining Act* or *Aggregate Resources Act*, and activities authorized under these Acts can continue to take place.

4. Provincial Wildlife Area - are managed for wildlife and to provide opportunities for outdoor recreation, particularly hunting and wildlife viewing.

5. Enhanced Management Area (EMA) - EMAs are established to provide more detailed land use policy in areas with special features or values.[26] A wide variety of resource and recreational uses can occur in EMAs. There are 2 EMAs in MVCA's jurisdiction: Mazinaw (Bon Echo Park) EMA and Crotch Lake EMA.

6. General Use Area (GUA) – This classification applies to most Crown land in the watershed. Specific policies for individual GUAs are established through local Crown land use planning and are to reflect an area's land use attributes and context. Most of these properties are managed in accordance with the *Mazinaw-Lanark Forest Management Plan* (see section 5.2).

Many lakes in the upper watershed are still surrounded by large tracts of Crown land that serve as natural recreational areas and, by default, limit shoreline development and density around lakes. O.Reg. 161/17 allows

[23] https://www.ontario.ca/laws/statute/90p43
[24] https://www.ontario.ca/document/guide-crown-land-use-planning/part-ii-provincial-policies-crown-land-use-designations-120-overview-crown-land-use-designations
[25] https://www.ontario.ca/laws/statute/06p12
[26] Five subcategories: Natural Heritage, Recreation, Remote Access, Fish and Wildlife, Great Lakes Coastal Areas.

some public occupancy and the construction of specifically listed structures without permit on many of these areas. Anything falling outside the regulation is subject to review and approval by the MNR.

### Land Claims

In 1991, the governments of Canada, Ontario and the Algonquins of Ontario (AOO) began negotiations to settle the Algonquin land claim,[27] which included creation of Whiteduck Provincial Park (Natural Environment Class) in the area of the Crotch Lake Conservation Reserve. Consultations initiated in 2020 resulted in an alternate proposal to add part of the subject lands to the Hungry Lake Conservation Reserve instead.

The lands now being assessed as an addition to Hungry Lake Conservation Reserve have ecological, historical, cultural and spiritual importance to the Algonquins of Ontario. The proposal is being evaluated as a Category B project under the Algonquin Land Claim Declaration Order made under the *Environmental Assessment Act.*[28] The proposed additions to Hungry Lake Conservation Reserve will depend on the successful negotiation of a final agreement to resolve the Algonquin Land Claim.

### Tax Incentives

The MNR administers a Conservation Land Tax Incentive Program (CLTIP) and a Managed Forest Tax Incentive Program (MFTIP) to encourage private property owners to conserve and steward natural areas of their properties.

- The CLTIP encourages and supports the long-term private stewardship of Ontario's provincially important natural areas. Portions of private property that have eligible natural heritage features may qualify for a 100% property tax exemption.[29]
- The MFTIP encourages and supports good forest management by giving a property tax reduction to eligible landowners who prepare and follow an approved Managed Forest Plan.[30]

## 5.2 Forestry and Fishing

### Mazinaw-Lanark Forest Management Plan

The 2021-2031 *Mazinaw-Lanark Forest Management Plan*[31] covers a third of Eastern Ontario, and is significant in the management of natural heritage values in the watershed due to the amount of crown land subject to it. The current plan contains the following management objectives:

1. Move towards a more natural forest landscape pattern and distribution.
2. Move towards a more natural forest landscape structure and composition.
3. Increase knowledge and understanding of tree genetic material that may be better adapted to future climates in the Mazinaw-Lanark Forest.
4. Maintain wildlife habitat for forest-dependent provincially and locally featured species.

[27] https://www.ontario.ca/page/algonquin-land-claim
[28] https://www.ontario.ca/laws/statute/90e18
[29] https://www.ontario.ca/page/conservation-land-tax-incentive-program
[30] https://www.ontario.ca/page/managed-forest-tax-incentive-program
[31] https://nrip.mnr.gov.on.ca/s/published-submission?language=en_US&recordId=a0z3g000000ofS9AAI

5. Maintain wildlife habitat for forest-dependent species at risk with known occurrences on the Mazinaw-Lanark Forest.
6. Ensure the successful renewal of harvested stands (naturally or artificially) to the most silviculturally appropriate species and tended until management standards or Free To Grow/Establishment is met, using the most appropriate and cost effective methods to achieve.
7. Maintain Red Oak across the Landscape.
8. Continually improve forest management operations.
9. Provide the levels of access to adequately carry out forest operations.
10. Provide a sustainable, continuous, and predictable wood supply from the forest that will meet the current recognized industrial demand of the forest.
11. Harvest a sustainable and continuous wood supply from the forest that will meet the current recognized industrial demand of the forest.
12. Minimize loss of Crown productive forest to infrastructure development thereby maintaining harvest levels and related community well-being.
13. Provide opportunities for First Nation and Metis involvement in forest management planning.
14. Encourage and support the participation of the Local Citizens Committee in the development of the Forest Management Plan.

## Fish Sanctuaries

The province has established five Fish Sanctuaries in the watershed, which are “No fishing” zones from March 1 to Friday before the second Saturday in May.

- Crotch Lake and Mississippi River - Palmerston Township, from Sidedam Rapids to north shore of Skull Island including McLean’s Bay.
- Dalhousie Lake and Mississippi River - Dalhousie Township, within a 300 m radius of the bridge of the Township road crossing the Mississippi River where it enters Dalhousie Lake.
- Indian River and Clayton Lake - within a 300 m radius of the Command Bridge crossing the Indian River where it enters Clayton Lake (Lanark Township).
- Mississippi River - Drummond Township, from 240.8 m west of Main Street in Innisville to Mississippi Lake.
- Mississippi River - Pakenham Township, between the falls in the Town of Almonte and upstream side of bridge on Lanark County Road 20.

The watershed is also home to a provincial fish culture stations and community hatcheries that is used to stock several lakes and streams in the watershed.

# 6.0 Federal Policy & Program Context

The federal government is signatory to several international agreements related to the protection of species at risk, migratory birds and their habitats; climate change mitigation and adaptation; and the conservation of biological diversity. It is also a major landowner within the City of Ottawa portion of MVCA's jurisdiction, and owns the Mississippi Lake National Wildlife Area (NWA)[32], home to the Mississippi Lake Bird Sanctuary. The NWA is managed in accordance with the *Canada Wildlife Act* and *Wildlife Area Regulations*. The primary purpose of NWAs is to protect and conserve wildlife and wildlife habitat, and prohibit activities that could interfere with the conservation of wildlife.

## Convention on Biological Diversity

In 2022, the Government of Canada announced conservation goals to "reverse the decline in biodiversity, better fight climate change, and maintain a strong, sustainable economy" at the 15th Conference of the Parties (COP15) to the United Nations Convention on Biological Diversity.[33] A key outcome of the conference was the "30 by 30" target[34], an international commitment to protect at least 30 percent of the world's lands and waters by 2030. The federal government has committed to conserving a quarter of Canada's lands and a quarter of its oceans by 2025, and is working toward conserving 30% by 2030.

## Habitat Targets

In 2013, Environment Canada published environmental targets for wetland and forest cover in areas off the Precambrian (Canadian) Shield:[35]

- Wetland cover: the greater of 10% of each major watershed and 6% of each subwatershed, or 40% of the historic wetland coverage, should be protected or restored.
- Forest cover: 30% forest cover at the watershed scale (high risk approach); 40% forest cover (medium risk approach); and 50% equates (low risk approach).
- Forest interior: a minimum of 10% interior forest should exist within a given watershed.
- Riparian forest: a minimum of 75% of stream length be naturally vegetated with a minimum 30 m wide naturally vegetated adjacent-lands area on both sides of the stream.

This approach is suitable for settled agricultural landscapes but does not transfer well to the Shield, which covers most of MVCA's watershed. In addition to forestry, mining and recreation activities, the Shield area has growing urban areas, cottages and second homes infills. In this region, a reasonable approach may be to consider how to actively manage linkages and areas of contiguous forest and wetland and assess how much of the landscape can be disturbed before there are substantive ecological effects.

[32] https://www.canada.ca/en/environment-climate-change/services/national-wildlife-areas/locations/mississippi-lake.html
[33] https://www.unep.org/un-biodiversity-conference-cop-15
[34] https://www.un.org/sustainabledevelopment/blog/2021/07/a-new-global-framework-for-managing-nature-through-2030-1st-detailed-draft-agreement-debuts/
[35] Source: *"How Much Habitat is Enough?" Guideline* (ECCC, 2013)

### Stewardship and Other Effective Area-based Conservation Measures (OECM)

Recognizing that large areas of land and shoreline are privately owned in Canada, the federal government has adopted "a model for how people can manage and steward the land sustainably, in ways that allow nature to thrive, achieving the same biodiversity results as a protected area.

"Other Effective area-based Conservation Measures" (OECM) is an internationally recognized classification applied to land and water, *other than a regulated protected area*, which are stewarded for the conservation of biodiversity and associated ecosystem services. These areas are intended to achieve long-term and effective conservation of biodiversity, even when the land is managed for different purposes.

## 7.0 Natural Infrastructure & Ecosystem Services

Natural infrastructure (or natural assets) refers to land, water, air, and natural features, species, and processes that support human life. Ecosystem services refer to the benefits we derive from those assets and processes.

In the current context, natural infrastructure refers to shorelines, wetlands, forests, and ground water recharge and discharge areas. And, ecosystem services refer to the food and drinking water, natural water storage, flood and drought mitigation and erosion control that those natural assets provide a local and watershed scale, as well as mental and physical health, recreational, and economic opportunities and benefits.

### Shorelines

Lake levels rise and fall according to the seasons, recent weather, and the operation of water control structures. All lakefront properties require a setback of land within which nothing interferes with or will be damaged by these fluctuations. Limiting shoreline development is essential to ensuring that the Water Management Plan for the Mississippi River can be implemented as designed and evolve over time to address changing climatic conditions. Where these lands are in public ownership, they should stay in public ownership.

### Wetlands and Forests

Wetlands, forested areas, and lands identified as groundwater recharge and discharge areas all perform water management functions and their development can have both local and watershed level impacts. Wetlands are scientifically recognized as providing a key function in mitigating flood, erosion and drought impacts. "A wetland as small as two hectares can retain water runoff from an area 70 times its size, significantly reducing flood damage".[36] Forests regulate precipitation, evaporation and water flows by slowing floodwaters, stabilizing land and preventing erosion. Both wetlands and forests provide a number of ecological services including:

- Improving water quality: As water moves slowly through a wetland, pollutants, excess nutrients and sediments can settle to the bottom or be filtered out by wetland plants instead of entering surface and groundwater systems. Forests also act as natural water filters, removing pollutants and other impurities before they reach streams, rivers, and other water sources.

[36] Office of the Auditor General of Ontario, 2022.

- Replenishing groundwater: Wetlands and forests connected to underground sources of water retain surface water, rainwater, or snow melt that seeps into the ground. They provide time for water to filter down and recharge aquifers and replenish groundwater.
- Providing shade and local cooling effects: Incoming energy from the sun is converted into energy for wetland and forest plants or evaporation instead of heat, thus reducing the impact of extreme heat events which are also becoming more frequent and intense due to climate change. They provide shade and cools the surrounding environment (especially helpful for reducing heat island effect in urban areas).
- Producing oxygen and absorbing carbon: The sequestration of carbon reduces greenhouse gas concentrations in the atmosphere and helps to mitigate climate change.
- Supporting biodiversity: Forests and wetlands have the ability to support high levels of biodiversity that support the food chain in turn the agri-food sector.

## Other Groundwater Recharge Areas

Groundwater recharge areas are also associated with gravel deposits and other soil features that allow a significant amount of rain and snowmelt to easily infiltrate and replenish shallow and deep aquifers. Those aquifers supply water to rural residents and businesses, and municipal communal well systems in Almonte and Carp. The Mississippi-Rideau Source Water Protection Program found these areas to be sparsely scattered across the watershed, covering about 9% of the total watershed area.

## Natural Infrastructure by Subwatershed

MVCA's jurisdiction has two distinct physiographic regions: the Canadian Shield in the west and the Ottawa-St. Lawrence Lowland Basin in the east.

- The "Shield" area has a hummocky topography with thin soil cover, rock outcroppings, and many lakes and small wetland scattered throughout.
- The "Lowlands" area is flatter with more soil and fertile lands.
- A transition area between the two physiographic regions runs through the south part of Lanark Highlands, Mississippi Lake and the center of Mississippi Mills.

The geography of these areas significantly impacts run-off and flood control in each region. Tables 2 and 3 provide key characteristics of the "Shield" and "Lowlands" subwatersheds in MVCA's jurisdiction. Several small Ottawa River tributaries are grouped into one "subwatershed" area.

Table 4 shows that most subwatersheds within MVCA's jurisdiction do not meet federal targets for wetland cover and various types of forest cover set out in Section 6.0. Sound management of what remains is needed for these natural assets to maintain their ecological services and functions. The degree to which the natural assets within each subwatershed are managed to retain their ecological services will impact long-term water management locally and downstream.

**Table 2: On-Shield Subwatersheds**

| Subwatershed/ Watershed | Area ($Km^2$) | Description/Features | Wetland and Forest (% Cover) | | | |
|---|---|---|---|---|---|---|
| | | | Wetland | Forest | Interior Forest | Riparian Forest |
| Upper Mississippi | 1028 | • Canadian shield topography with low population density but high amount of waterfront (cottage country) development<br>• has most of the lakes and all available storage for stream flow regulation<br>• most water management occurs here | 11.9 | 86.8 | 39.7 | 56.5 |
| Central Mississippi | 395 | • Canadian shield topography with pockets of arable land and low population density<br>• has the High Falls dam hydroelectric generating system (OPG)<br>• flooding issues on Dalhousie Lake | 14.5 | 78.8 | 27.7 | 52.6 |
| Lower Mississippi (on shield) | 423 | • the lower part of the system that is on the Canadian Shield with rural development and relatively low population density<br>• has the Pakenham Hills and Clayton-Taylor Lakes | 17.7 | 72.8 | 23.8 | 47.9 |
| Clyde River | 663 | • Canadian shield topography with low population density but high amount of waterfront (cottage country) development<br>• has a number of small lakes but no storage/reservoir capacity | 11.2 | 81.9 | 32.5 | 55.8 |
| Fall River | 485 | • Canadian shield topography with pockets of arable land and low population density<br>• has several large lakes and Bolton Creek<br>• is essentially an uncontrolled system | 16.4 | 72.9 | 17.3 | 47.9 |

Sources: MVCA *2023 Watershed Report Card* and *Mississippi River Water Management Plan*

**Table 3: Lowlands Subwatersheds**

| Subwatershed/ Watershed | Area ($Km^2$) | Description/Features | Wetland and Forest (% Cover) | | | |
|---|---|---|---|---|---|---|
| | | | Wetland | Forest | Interior Forest | Riparian Forest |
| Carp River Watershed | 306 | • St. Lawrence Lowland's topography with mix of farmland and rural development in the north, and urban development in and around Kanata and Stittsville in the south<br>• uncontrolled system<br>• highly urbanized headwaters, broad floodplain areas downstream | 9.3 | 32.4 | 7.7 | 23.3 |
| Ottawa River Tributaries | 282 | • St. Lawrence Lowland's topography with a mix of rural development, urbanized development and high-density waterfront development along the Ottawa River<br>• several watercourses outlet directly to Ottawa River including: Constance Ck, Shirley's Brook, Watts Ck, Kizell Drain<br>• uncontrolled systems | 14.4 | 37.1 | 6.8 | 24.0 |
| Mississippi Lake | 300 | • Mississippi River system on the transition zone between the Shield and Lowlands<br>• higher population density due to Mississippi Lake and vicinity to Carleton Place and Hwy 7 corridor<br>• has Mississippi Lake, the largest, most developed lake and the largest flood damage centre | 25.1 | 44.1 | 11.4 | 34.1 |
| Lower Mississippi (off shield) | 454 | • St. Lawrence Lowland's topography with mix of farmland and rural development, urbanized development in and around Carleton Place and Almonte and waterfront development along the river.<br>• is the lower part of the Mississippi River system with a pronounced river valley downstream of Almonte<br>• has most of the hydroelectric production | 9.2 | 29.8 | 6.3 | 29.9 |

Sources: MVCA *2023 Watershed Report Card* and *Mississippi River Water Management Plan*

**Table 4: Federal[37] Wetland and Forest Targets vs. Actual at Subwatershed Scale**

| Subwatershed / ECCC Targets | Wetland | Forest | Interior Forest | Riparian Forest |
|---|---|---|---|---|
| | **>6% subwatershed >10% watershed scale** | **>30%** | **>10%** | **>75%** |
| Carp River Watershed | 9.3 | 32.4 | 7.7 | 23.3 |
| Ottawa River Tributaries | 14.4 | 37.1 | 6.8 | 24.0 |
| Mississippi Lake | 25.1 | 44.1 | 11.4 | 34.1 |
| Lower Mississippi (off-shield) | 9.2 | 29.8 | 6.3 | 29.9 |

## 8.0 Hydrological and Ecological Conservation

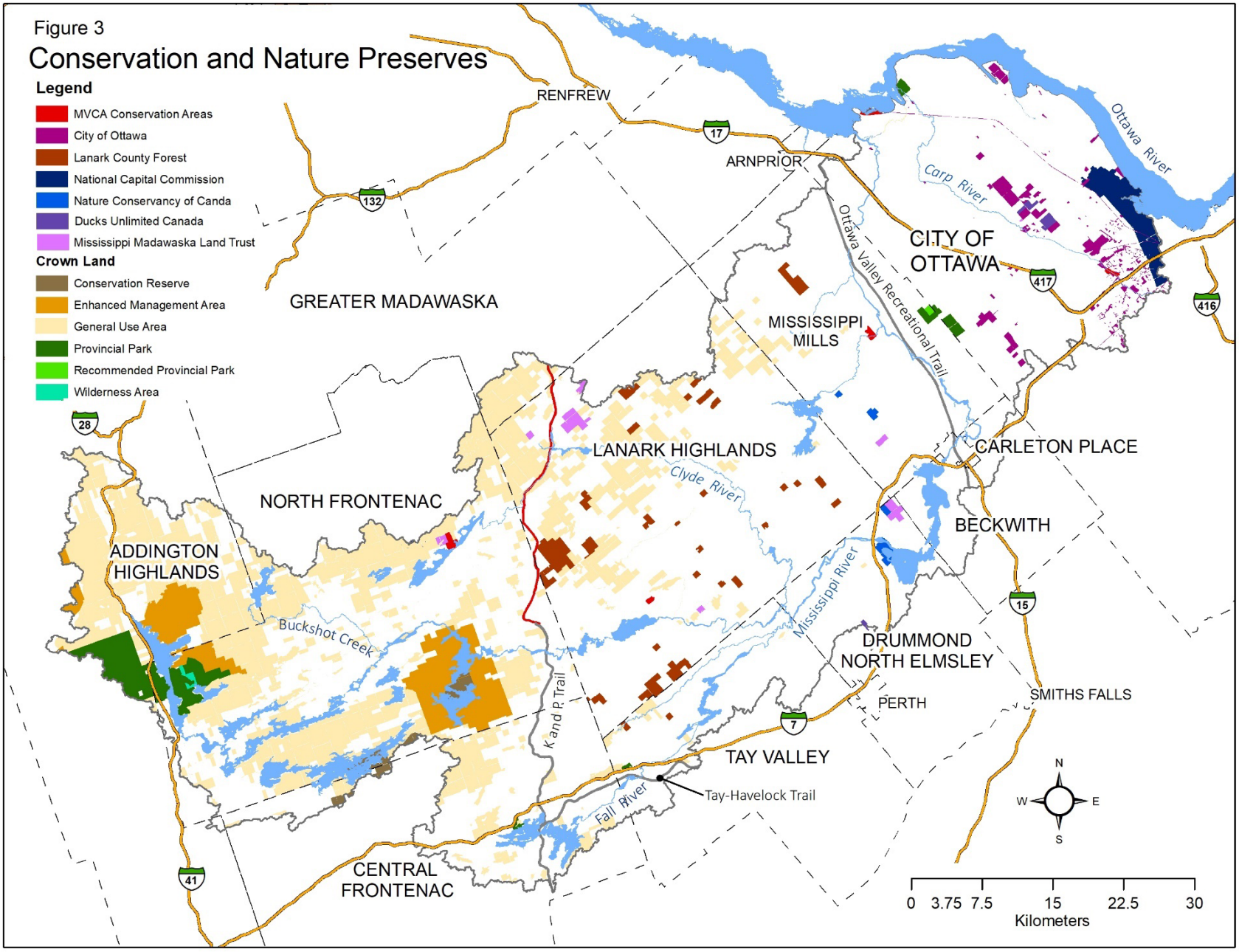
As shown in Figure 3, approximately 32,540 ha of woodlands, wetlands, and other lands are protected for some level of conservation within the watershed by MVCA and others. However, the land between is under increasing pressure as land development continues and more people discover this area as represented by travel times from urban nodes shown in Figure 4. Ongoing road extensions, widening, and the introduction of divided highways are reducing travel times making more remote areas of the watershed accessible to urban dwellers seeking recreational opportunities as well as cottages and year-round housing opportunities.

Continued efforts are needed by all levels of government, individual landowners, MVCA and other conservation minded organizations to protect natural heritage, hydrological and ecological functions within the watershed.

[37] Source: *"How Much Habitat is Enough?" Guideline* (ECCC, 2013)

Figure 3

# Conservation and Nature Preserves



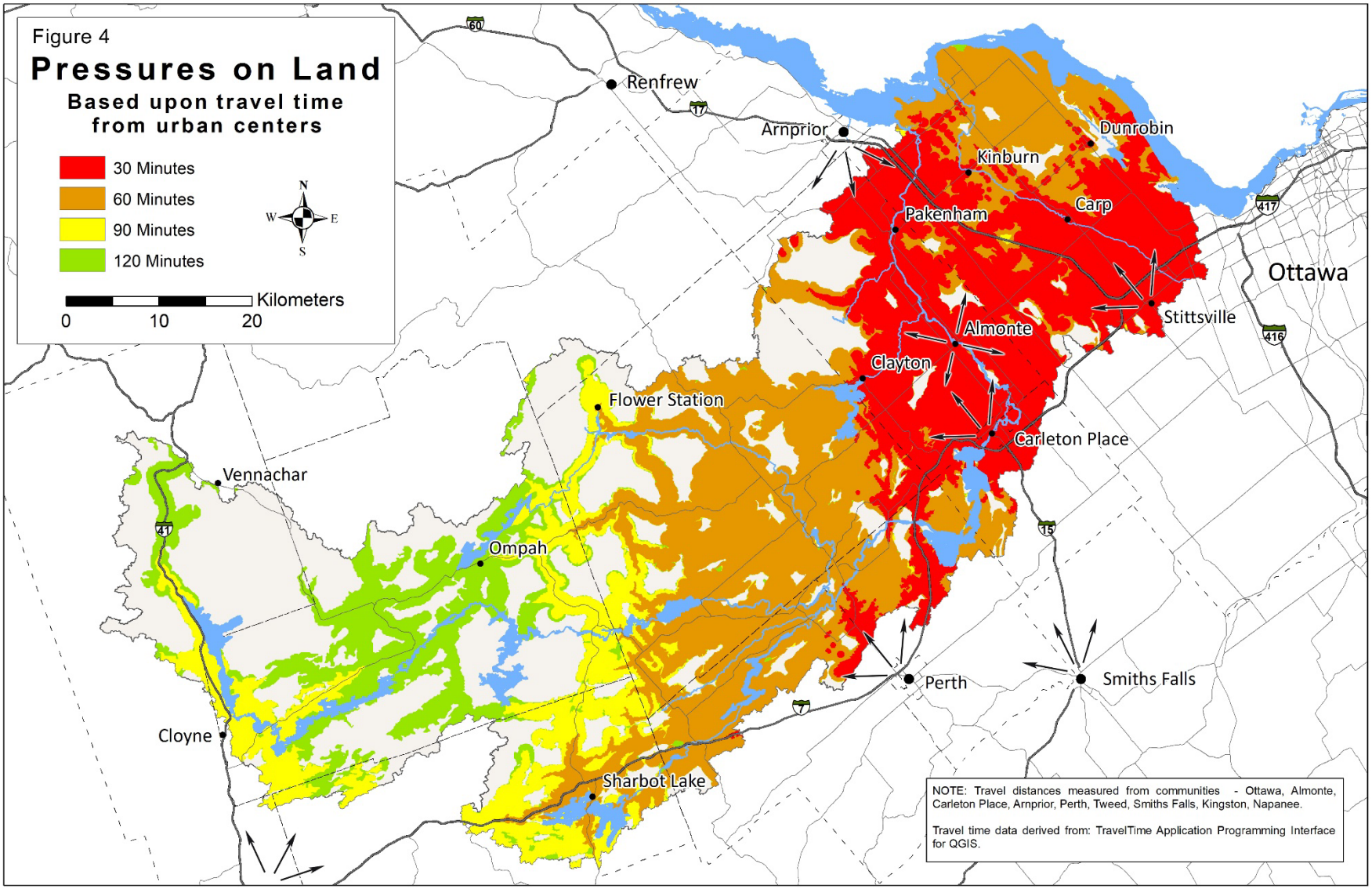


Figure 4
Pressures on Land
Based upon travel time from urban centers
30 Minutes
60 Minutes
90 Minutes
120 Minutes
N
W
E
S
Kilometers
0
10
20
Renfrew
Arnprior
Dunrobin
Kinburn
Pakenham
Carp
Ottawa
Stittsville
Almonte
Clayton
Flower Station
Carleton Place
Vennachar
Ompah
Perth
Smiths Falls
Cloyne
Sharbot Lake
NOTE: Travel distances measured from communities - Ottawa, Almonte, Carleton Place, Arnprior, Perth, Tweed, Smiths Falls, Kingston, Napanee.
Travel time data derived from: TravelTime Application Programming Interface for QGIS.

## 8.1 Core Natural Areas (CNA)

Figure 5 identifies large areas of natural interior habitat and significant riverine linkages within the watershed. For this project the following parameters were used:[38]

- Interior habitat: contiguous areas of wetland or forest setback 100 m from hard, human-created edges (e.g., roads, railways) where the interior habitat was:
  - On-Shield > 640 ha
  - Off-Shield (Lowlands) >140 ha
- Riverine linkages: natural shoreline environment along a river that generally extends over 100 m inland over several kilometres of riverfront that join two or more larger areas of wildlife habitat.

This approach largely captured:

- Provincially significant wetlands
- Wetland complexes
- Unevaluated wetlands >30 ha
- Forest canopy and age:
  - On-Shield >120 years
  - Off-Shield / Lowlands >100 years

It does not capture all of the following, which could help to prioritize land for conservation purposes:

- Hydrological linkages (100 m either side of 2nd order watercourse[39])
- Terrestrial linkage (1 km-wide minimum and wider)
- Areas of Natural and Scientific Interest (ANSI)
- On-shield only: marble present or likely wolf corridor
- Off-shield only: Karst known or inferred

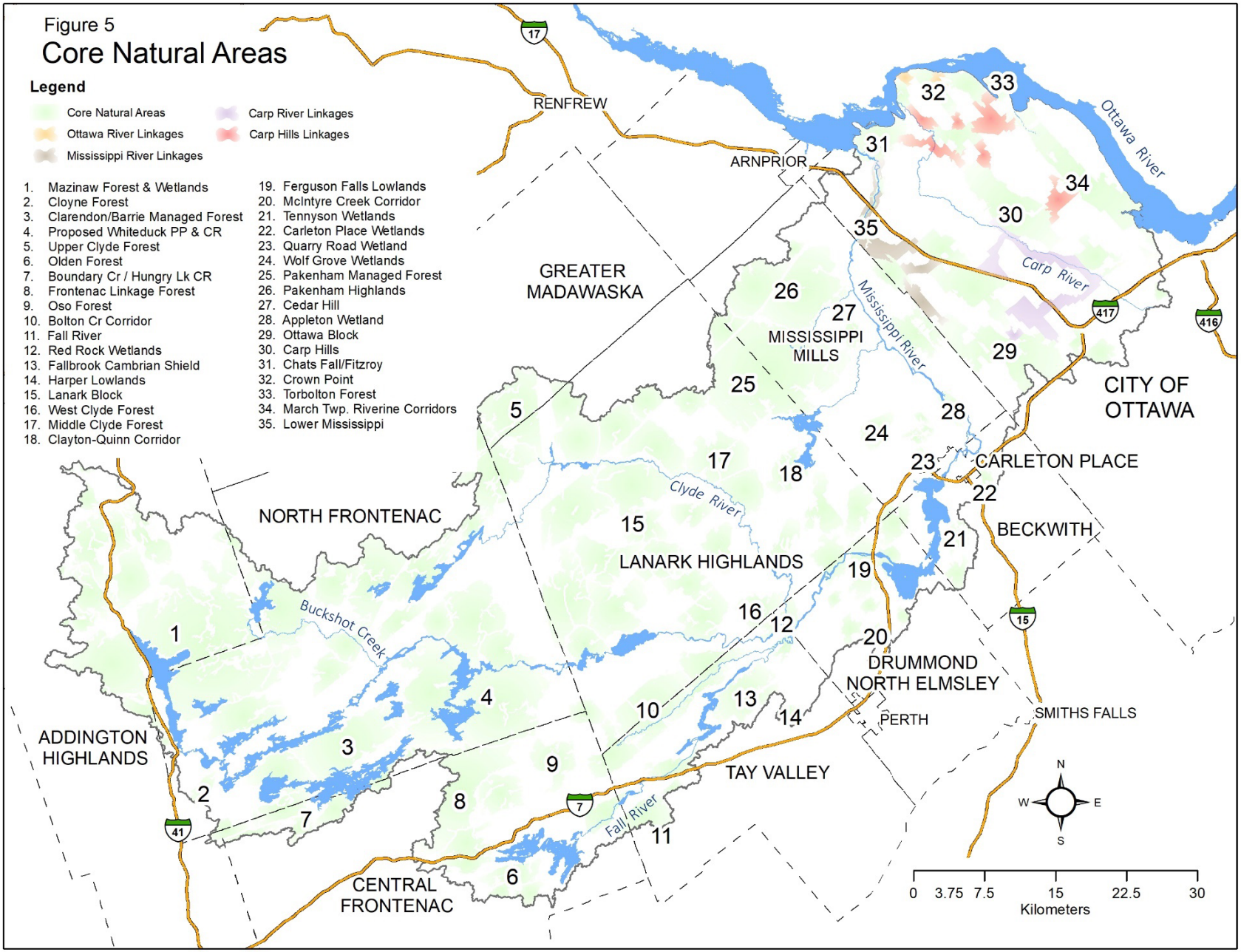
These areas represent the best opportunity to collaborate with others for natural heritage protection. See Appendix G for summary descriptions of the areas identified in Figure 5.

[38] Within the City of Ottawa, Schedule C-11-A of the *Official Plan* was used to identify key areas.

[39] Headwater streams, which are at the highest elevation in the watershed, are first-order streams. When two first-order streams join they become a second-order stream. And when two second-order streams join they form a third-order stream. Source: https://agriculture.canada.ca/en/environment/resource-management/managing-water-sustainably/understanding-watersheds

Figure 5

# Core Natural Areas



## 8.2 Other Corridors & Linkages

Corridors are linear features that allow movement between various features.

- Natural Linkages such as rivers, stream valleys, and escarpments allow for the safe movement of wildlife between different landscapes for foraging, reproduction, colonization, and facilitate interbreeding of plants and animals and maintenance of viable populations. Figure 5 illustrates linkages identified within the City of Ottawa Official Plan.
- Man-made Corridors such as transportation routes, utility corridors, and fence rows can act as barriers to wildlife migration between natural landscapes and interrupt those linkages. However, these impacts can be significantly mitigated through smart design and construction.

Re-establishment of natural linkages can aid to support biodiversity and a healthy watershed. For example, a man-made corridor like a decommissioned railbed can evolve into a semi-natural corridor such as the K&P Trail. And, a utility corridor such as Hydro One transmission corridors can be semi naturalized and maintained to support trails like the Meadoway in the GTA.[40]

## 8.3 Conservation Partners & Initiatives in Eastern Ontario

A number of natural heritage system projects have been undertaken that cover parts of MVCA's jurisdiction. These projects have produced mapping to support a range of goals, from the broad landscape scale of the Algonquin to Adirondacks (A2A) Collaborative, to the finer property level scale of the Mississippi Mills/Mississippi Valley Field Naturalists project. While sharing many of the same broad principles and objectives, each had different goals and used different information and criteria to identify and define the boundaries of the natural heritage systems.

### County of Frontenac

A study undertaken by the County of Frontenac, the Natural Heritage Study (NHS)[41] is a comprehensive evaluation of natural heritage features such as wetlands, forest cover, and wildlife habitat at a regional scale across the County, and includes the mapping of a connected system of these features. The mapping is accompanied with policy recommendations that can be used by planners to protect significant natural features from development. This comprehensive regional review of natural heritage mapping and policies set a foundation for the natural heritage policies of the first draft of the County Official Plan.

### City of Ottawa

Ottawa has identified a natural heritage system comprised of a variety of significant natural features, associated contributing features and connecting linkages. This system was defined as part of the comprehensive Official Plan Review process culminating in an Official Plan Amendment (OPA 76) approved in 2009. The definition

[40] https://themeadoway.ca/2020/03/13/game-changer-hydro-corridor/
[41] https://frontenac.civicweb.net/FileStorage/11D6A62B698B4B499A1E723C3965B8D5-12-12-19%20Sustainability%20-%20Natural%20Heritage%20Study%20F.pdf

includes new local criteria for the determination of “significance” for natural heritage features such as woodlands and valley lands.

## Land Conservancy for Kingston, Frontenac, Lennox & Addington (LC-KFLA)

The LC-KFLA have produced “Natural Heritage Plan for the Land Conservancy for Kingston, Frontenac, Lennox and Addington” with a land acquisition strategy.[42] “The general philosophy for constructing the Plan was first, to identify features that should be included based on their significance to the natural heritage of the region. Second, the Plan identified a certain width of lands adjacent to the feature: the most appropriate place to identify building blocks on protected areas that would be most likely to improve their size, configuration, and connectivity, and thus increase their viability.” The report includes mapping identifying LC-KFLA priority areas.

## Mississippi Madawaska Land Trust (MMLT)

The Mississippi Madawaska Land Trust accepts qualified lands through gift or purchase to be managed by them as Nature Sanctuaries. It also enters into conservation easements with landowners to legally restrict future development. It is the mission of the MMLT “to legally protect and steward these private lands which have ecological, biodiverse, aesthetic and cultural value, while at the same time fostering engagement with wilderness”. The MMLT has produced mapping using GIS to identify potential priority areas for acquisition and agreements. Such areas were identified as large areas of natural interior habitat (cores) within the watershed, based on forest and wetland cover. Interior habitat was defined as wetland or forest 100 m from hard, human-created edges (e.g., roads, transmission lines, railway lines).

## Sustaining What We Value

Sustaining What We Value is a community-based planning project, in the area of the Township of South Frontenac, Lanark, Leeds and Grenville Counties designed for local residents to help sustain the natural environment across the landscape.[43] The project was led by a partnership that included: the Eastern Ontario Model Forest, St. Lawrence Islands National Park, the Frontenac Arch Biosphere Reserve, the United Counties of Leeds and Grenville, Ontario Nature, Environment Canada and the Ontario Ministry of Natural Resources. It identified and mapped natural heritage features and the connections between them. It produced a data package that includes spatial data, project reports and presentation materials.

The data has been made available to inform and support:

- land use planning and resource management decision-making
- strategic priorities for stewardship and restoration projects
- priorities for conservation land acquisitions
- priorities for inventory programs and research projects

[42] https://naturallyla.ca/wp-content/uploads/2022/10/Lennox_and Addington_NHS_Final-report-Revised-August-2022_Compressed.pdf

[43] https://geohub.lio.gov.on.ca/documents/lio::sustaining-what-we-value-a-natural-heritage-system-for-the-frontenac-lanark-leeds-grenville-area-of-eastern-ontario/about

## Algonquin to Adirondacks Collaborative (A2A)

A mapping project that builds on the Sustaining What We Value's mapping work in Eastern Ontario. It identifies connected natural habitat between the Adirondack Park in New York State and Algonquin Provincial Park in Ontario.[44]

The goal of this project was: to create a habitat connectivity mapping tool that will support land conservation, stewardship activities, land use planning, and other conservation efforts by planning authorities, conservation groups, community organizations, and residents in the A2A region.

A connectivity mapping project (2013-2014) with the Ontario Ministry of Natural Resources, expanding on the Sustaining What We Value maps, with the same methodology, to include the entire A2A region.

## Nature Conservancy of Canada (NCC) – Great Lakes Blueprint

Presents an ecoregional assessment of the terrestrial biodiversity of the Canadian portion of the Great Lakes ecoregion. It entailed a GIS based analysis of representation and gaps in existing protected areas. The project included an assessment of biodiversity targets. The mapping was derived based on a "course-filter biodiversity analysis" to assess highest scoring examples of ecological systems (using FRI mapping on the Canadian Shield) and "fine-filter" targets for species and vegetation communities of conservation concern (based on Natural Heritage Information Centre data). It divided Southern Ontario and the Canadian Shield into two study areas.

## The Land Between

The Land Between (TLB) is a conservation organization that was initiated to research the natural and ecological features of a region believed to be an ecotone extending across central Ontario from the Frontenac Arch in the east to Georgian Bay and Southern Parry Sound.[45] Their work extended to include mapping areas of high biodiversity and opportunity "with assessment for feasibility of stewardship, securement and restoration. TLB work with land trusts, municipalities, and stewardship groups.

[44] http://www.a2acollaborative.org/mapping.html
[45] https://www.thelandbetween.ca/

# Appendices

## Appendix A: Relevant Watershed Plan Actions

The following is a selection of Actions contained in the *Mississippi River Watershed Plan* that are most relevant to the development of a Land Conservation Strategy.

| Actions/Strategic Directions | Implementation Considerations and Options |
|---|---|
| **GD1 (Growth & Development):** Work with all partners to continue to support environmentally sustainable growth for risk mitigation and the protection of watershed values and features.<br><br>**Partners:** All partners and stakeholders listed throughout this Plan | Key tools for environmental sustainability are:<br>• the protection of wetlands, for natural storage and other benefits.<br>• riparian buffers along all waterways including natural features (lakes, rivers, streams), and manmade features (municipal and agricultural drains).<br>• the 30 m setback from normal high-water mark for structural development and hardened surfaces.<br>the promotion of low impact development measures (LIDs)<br>• the protection of natural features and systems. |
| **WM3 (Water Management):** Undertake a Water Storage Capacity and Management Study that considers both man-made (dams and reservoirs) and natural storage (wetlands) options and capacity.<br><br>**Partners:** MVCA (Lead), Universities | • Undertake an analysis of climate impacts on existing storage capacity.<br>• Natural storage component could be done in-house or as a research collaboration with the academic community. |
| **WM7 (Water Management):** Work with municipalities, agriculture and development communities, landowners and other partners to quantify, value and protect wetlands as hydrologic and natural assets.<br><br>**Partners:** MVCA, Municipalities, Universities, DEVEL and AGRI, Indigenous Peoples, NGOs (Shared leadership roles) | • Explore collaborations with academic community to undertake ecological/environmental valuation research.<br>• Explore federal funding opportunities to support valuation research relative to climate change resiliency. |
| **NS1 (Natural Systems):** Develop a Land Conservation Strategy to mitigate flood, erosion and other natural hazards, and to support the ecological services provided by natural systems. | • Work with the province, municipalities, agricultural community, development and forestry communities, and other owners of large land holdings in maintaining and improving climate and ecosystem resilience through: |

| Actions/Strategic Directions | Implementation Considerations and Options |
|---|---|
| **Partners:** MVCA (Lead), MNR, Municipalities, Canadian Wildlife Service, Agriculture, Development and Forestry Communities, Indigenous Peoples, Land Trusts, Other Conservation Groups | • programs and incentives (including tax incentives) for woodland protection and reforestation,<br>• wetland protection and creation, and<br>• low impact development, with a focus on enhancing on-site retention and infiltration of water.<br>• Work with municipalities and stewardship groups to improve and increase the recognition and protection of natural heritage (woodlots, waterways and wetlands) within the watershed, with special attention to agricultural and high growth areas.<br>• Assist municipalities by preparing comprehensive Natural Heritage Systems Mapping of Ecoregion 6E to address Provincial Policy Statement (PPS, 2020) requirements, on a fee for service basis.<br>• Adopt a Natural Heritage Strategy for the east Lowlands area to achieve minimum targets: wetland cover of greater than 30%, forest cover of greater than 30%, and forest interior greater than 10%.<br>• Work with MNR to identify Crown holdings within the watershed that are flagged for potential sale, and develop strategies to ensure the protection of Crown natural assets.<br>• Support the promotion of land trusts as a means of protecting natural features and systems. |
| **NS2 (Natural Systems):** Encourage and support studies that quantify the ecosystem services and climate resiliency provided by natural asset features and functions (wetlands, woodlands, etc.).<br><br>**Partners:** MVCA, Universities, Provincial and Federal Agencies | Environmental valuations can take many forms including:<br>• watershed modelling assessments to quantify water storage services provided by wetlands;<br>• nutrient modelling to quantify nutrient assimilation services provided by wetlands, riparian buffers and different land uses;<br>• forest cover assessments to quantify carbon sequestering services. |
| **NS3 (Natural Systems):** Work with municipalities and public agencies to improve the application and coordination of regulatory tools for the protection of wetlands, woodlands and natural systems.<br><br>**Partners:** MVCA, MUNCI, MNR, MECP, OMAFRA | • Support counties and municipalities in fulfilling Provincial Policy Statement (PPS 2020) requirements for Natural Heritage. Systems. This could entail collaboration on a mapping product.<br>• Encourage municipalities, through their Official Plans, to set measurable environmental targets for environmental features based on Environment Canada “How Much Habitat is Enough, 2013” guidelines.<br>• Work with municipalities to determine and implement strategies, policies and measures that support stronger |

| Actions/Strategic Directions | Implementation Considerations and Options |
|---|---|
| Shared leadership roles relative to legislative responsibilities | implementation and compliance with the 30 m water setback and shoreline vegetated buffers, for the protection of a natural riparian area and aquatic habitat. |

## Appendix B: MVCA Conservation Properties

| **Name** (date acquired) | **Location** | **Size** | **Activities & Amenities and other Details** |
|---|---|---|---|
| **K&P Trail CA** (1990) | 75 km trail between Kingston and Sharbot Lake - MVCA only owns 30 km section between Snow Road Station and Berryville | 30 km | • Multiuse trail used for hiking, biking, ATVing, and snowmobiling<br>**Active disposition**:<br>• In discussions with the Counties of Lanark, Frontenac and Renfrew regarding potential transfer in ownership |
| **Mill of Kintail CA** (1972) | Town of Mississippi Mills - North of Almonte<br>2854 Concession 8, Ramsay | 68 ha. | • Hiking/snowshoeing trails<br>• R. Tait McKenzie and Dr. James Naismith Museum.<br>• Education programs and summer day camps<br>• Volunteer opportunities<br>• Playground<br>• Facility rentals<br>**Ongoing ownership and management as a Conservation Area**<br>One of MVCA's key assets<br>Site include the R. Tait McKenzie and Dr. James Naismith Museum |
| **Palmerston - Canonto CA** (1971) | North Frontenac Twp. - Northeast of Ompah Trail site - 1153 Arcol Road, North Frontenac Township | 105 ha. | • Hiking trails (5 km)<br>**Ongoing ownership by MVCA -** leased to the Township of North Frontenac who operate/ manage/maintain the CA |
| | Beach Site - 1195 Arcol Road | | • Beach with picnic and washroom facilities **Active disposition** – in the process of being sold to the Township of North Frontenac |
| **Purdon CA** (1988) | Lanark Highlands Twp. - north of McDonalds Corners, west of Watsons Corners, Dalhousie 8th Concession | 25 ha. | • Hiking trail (1.7 km)<br>• Fully accessible boardwalk<br>• Wheelchair accessible outhouse<br>• Parking and picnic area<br>• Focus on orchid colony with interpretive signage<br>**Ongoing ownership and management as a Conservation Area**<br>Primary focus on maintaining and showcasing orchid colony |

| **Name** (date acquired) | **Location** | **Size** | **Activities & Amenities and other Details** |
|---|---|---|---|
| **Morris Island CA** (1983) | West Carleton on the Ottawa River; 156 Morris Island Drive, Fitzroy Harbour | 47 ha. | • 6 km of hiking trails, washrooms, canoe launch, picnic area<br>• forested woodlands and wetlands |
| **Carp River CA** (2018) | NW of Terry Fox Drive and Campeau Drive at 515 Didsbury Rd. | 34 ha. | • 4 km of paved trails for walking and cycling linking urban areas and surrounding reconstructed riverine environment<br>• Wetlands and grasslands |

## Appendix C: MNR Crown Land Properties

| **Name** *(MNR code and designation, where applicable)* | **Location** | **Size (ha)** | **Uses and Other Details** |
|---|---|---|---|
| **Bon Echo Provincial Park** *(P8e natural environment class)* | North Frontenac Twp.<br>- south end of Mazinaw Lake | 6629 | Includes campground. Contains largest concentration of Indian rock painting (pictographs). Protects a large and representative sample of southern Canadian Shield. |
| **Burnt Lands Provincial Park** *(P47 Nature Reserve Class)* | Mississippi Mills and Ottawa<br>- east of Almonte | 516 | Supports diversity of plant and animal species, many of which are provincially or regionally rare. https://www.ontario.ca/page/burnt-lands-provincial-park-management-statement |
| **Burnt Lands Recommended Provincial Park** *(P47a)* | Mississippi Mills and Ottawa<br>- east of Almonte | 476 | Passive day use activities are permitted. Some use of the area for hiking and nature appreciation. No official trails, through many incidental trails are evident and firebreaks throughout the properties. A Park Management Plan will be prepared. ATVing, horseback riding, and sport hunting will not be permitted. A section of a snowmobile trail crosses the property as an “unauthorized use” and will need to be assessed. |
| **Fitzroy Provincial Park** *(P4444 Recreational Class)* | Fitzroy, Ottawa,<br>- on Ottawa River at Carp River outlet | 185 | Campground, beach, picnicking, nature trails, boating and day use. |

| **Name** *(MNR code and designation, where applicable)* | **Location** | **Size (ha)** | **Uses and Other Details** |
|---|---|---|---|
| **Sharbot Lake Provincial Park** *(P356 recreational class)* | Central Frontenac Twp. – on Sharbot and Black Lakes | 80 | Campground, beaches, picnicking, nature trail, boating and day use. |
| **Silver Lake Provincial Park** *(P416 recreational class)* | Tay Valley Twp. | 43 | Campground, beach, picnicking, nature trail, boating and day use. |
| **Crotch Lake Conservation Reserve** *(C2)* | North Frontenac Twp. | 374 | Permitted activities: fishing, hunting, recreation trails, snowmobiling (on trail), horseback riding, existing private camps existing commercial tourism.<br>Not permitted: commercial timber harvest, hydro generation and power development.<br>Sale of lands not permitted, except for minor dispositions supporting existing uses. |
| **Hungry Lake Conservation Reserve** *(C3)* | Central Frontenac, North Frontenac Twp. | 3518 | Permitted activities: fishing, hunting, recreation trails, snowmobiling (on trail), horseback riding, existing private camps. Sale of lands is not permitted, except for minor dispositions in support of existing uses. |
| **Crotch Lake Enhanced Management Area** *(E1a remote access)* | North Frontenac Twp. | 7766 | Permitted activities: aggregate extraction, commercial timber harvest, hydro generation and power development, fishing, hunting, recreation trails, snowmobiling (on trail), horseback riding, existing private camps existing commercial tourism.<br>Sale of lands may be permitted for permitted uses, not for creation of cottage lots. |
| **Mazinaw Lake Enhanced Management Area** *(E6a remote access)* | North Frontenac Twp. | 3883 | This area is used extensively by the forest industry, fur harvesters, hunters, anglers and snowmobiles.<br>Permitted activities: aggregate extraction, commercial timber harvest, hydro generation and power development, fishing, hunting, recreation trails, snowmobiling (on trail), horseback riding, existing private camps existing commercial tourism.<br>Sale of lands may be permitted for permitted uses, not for creation of cottage lots. |

## Appendix D: Mississippi- Madawaska Land Trust Properties

| Name | Location | Size (ha) | Uses and Other Details |
|---|---|---|---|
| **Blueberry Mountain at cliffLAND** (Conservation Easement) | Lanark Highlands Twp. | 505 | Conservation Easement Agreement. Nature trails through variety of habitats from pine and hemlock ridges, cedar groves, scenic outcrops, waterfalls, creeks, ponds, marshes, and a bog that hosts abundant wild cranberries. Numerous different species considered uncommon in Lanark County, sparse, or rare and species-at-risk. |
| **Byrne Big Creek Nature Reserve** (Closed to public) | Lanark Highlands Twp. | 40 | Donated to MMLT. Closed to the public. Most of the property is part of McCulloch's Lake Provincially Significant Wetland. The most ecologically sensitive among the properties in MMLT's property portfolio. |
| **Clydelands** (Conservation Easement – restricted access) | Lanark Highlands Twp. | 40 | Conservation Easement Agreement. Public access/use is restricted. Among the most rugged, wild and natural in all of the county. It is traversed by the Middle Branch of Clyde Creek which flows through a broad rock-strewn valley bounded on its sides by several 200 to 250-foot domed rocky hills with many near vertical cliffs. |
| **High Lonesome Nature Reserve** | Mississippi Mills(Pakenham) | 80 | Donated to MMLT. In the Pakenham Hills and within the Pakenham Mountain Provincially Significant Wetland Complex. Trails through regenerating upland forest, meadows and wetlands. Opportunities to observe varied habitats and wildlife. It is MMLT's management plan to proactively restore the degraded areas to their natural state. |
| **Keddy Nature Sanctuary** (Conservation Easement – restricted access) | Drummond/North Elmsley Twp. | 214 | Conservation Easement Agreement. Public access/use is restricted. It protects 35% of the Scotch Corners Provincially Significant Wetland and contributes critical ecosystem services to the Mississippi watershed. Located in the natural corridor stretching form Pakenham Mountain to Mississippi Lake, it will contribute to climate change mitigation. |
| **Marble Woodlands** | Mississippi Mills, Lanark Co | 80 | Nature trails and over 250 species of plants, 20 species of insects, 4 species of reptiles and amphibians, 20 species of birds, and 7 species of mammals were identified during the initial property assessment. Several have been identified as at-risk or of special interest. |
| **Poole Family Nature Sanctuary** | Drummond/North Elmsley Twp. | 45 | Donated to MMLT. A high-quality example of rolling forested ecosystems of the Canadian Shield. The forest is Significant Woodland and the open wetlands are part of the Scotch Corners Provincially Significant Wetland Complex. 23 rare or sparse plant species in the region and 7 species at risk have been found. Adjoins Keddy Nature Sanctuary to the northwest. |

| Name | Location | Size (ha) | Uses and Other Details |
|---|---|---|---|
| **Rose Hill Nature Reserve** | Addington Highlands, County of Lennox & Addington | 145 | Land acquired because of its high wilderness value. With passive management, it expected to become a showcase of rich habitats, especially for threatened and endangered species. The property lies along the centre of the important Algonquin to Adirondack corridor—a biological highway/natural linkage that is significant at the continental scale. |
| **Salamander Forest** (Conservation Easement – restricted access) | Drummond/North Elmsley Twp. | 64 | Conservation Easement Agreement. Public access/use is restricted. Salamander Forest protects part of the provincially significant Scotch Corners Wetland Complex and is a regional height of land and the source for creeks draining into Mississippi Lake. |
| **Whaleback Woodland Reserve** (restricted access) | Carp area, West Carleton, Ottawa | 6 | Land acquisition. Public access/use is restricted. Part of the Carp Hills Candidate Life Science Area of Natural and Scientific Interest (ANSI) and is designated Regionally Significant. Important to the protection of the Carp Hills which comprise almost 10,000 acres of environmentally significant forests, wetlands, and rock barren uplands and provides habitat to several species at risk. |

## Appendix E: City of Ottawa Conservation Properties

| Name and Designation (where applicable) | Location | Size (ha) | Uses and Other Details |
|---|---|---|---|
| **Morris Island Conservation Area** | Ottawa River near Fitzroy Harbour, West Carleton, Ottawa | 47 | Jointly owned by City of Ottawa and Ontario Power Generation (OPG). Managed by MVCA as a Conservation Area through a Vacant Land Lease with City of Ottawa dated March 2018 and in effect until Aug 31, 2038.<br>• Wheelchair accessible facilities<br>• Nature trails and interpretive signage<br>• Fishing platforms<br>• Washrooms<br>• Picnic areas |
| **Carp River Conservation Area** | West Carleton, Ottawa | 31 | License of Occupation Agreement with City of Ottawa signed in 2018 and renewed in 2020 - in effect until 2025.<br>• 4 km “River Walk”<br>• Interpretive signage |

| | | | |
|---|---|---|---|
| **South March Highlands Conservation Forest** | Kanata North, Ottawa | 457 | Within the larger South March Highlands forest and natural environment area. It is located immediately adjacent to and within the urban and developing area in Kanata. The forest is one of the most ecologically significant and diverse areas in the City of Ottawa. It also provides opportunities for recreational use, such as hiking and mountain biking. |
| **Carp Hills Municipal Nature Reserve** | Carp area, West Carleton, Ottawa | 1000 | The City of Ottawa owns large tracts of natural lands in the Carp Hills, for the purposes of environmental protection and outdoor recreation. The Carp Hills are a local outcropping of the Canadian Shield, with a mosaic of rock barrens, beaver ponds and mixed woods. Uses include: hiking, mountain biking, snowmobiling, snowshoeing, cross-country skiing and hunting. |
| **Torbolton Forest** | Constance Bay, West Carleton, Ottawa | 260 | The natural area is within the Constance Bay Sand Hills, which is a provincially significant dune forest complex - tall red, white and jack pine and red oak. Attractions include walking, horseback riding, cycling, skiing and snowmobiling.<br><br>Torbolton Nordic Ski Club maintains approximately 30 km of ski trails through-out the Torbolton Forest and around the peninsula. The snowmobile trail, which runs down the centre of the forest, is marked and groomed and requires the use of a West Carleton Snowmobile Trails Association trail pass. |
| **Trillium Woods** | Kanata North, Ottawa | 134 | Attractions include walking with accessible pathways, hiking, dog-walking, jogging, skiing, snowshoeing, and mountain biking. Trail connection to the South March Highlands trails north of Terry Fox Road. |
| **Kemp Woodland** | Stittsville, Ottawa | 9 | The Kemp Woodlot is a 9 ha mature cedar forest in Stittsville that is well over 100 years old. The natural area is along the Trans-Canada Trail and there are informal trails in the natural area. |
| **Sheila McKee Memorial Park** | Dunrobin, West Carleton, Ottawa | tbc | Escarpment along the Ottawa River's shore. The rocky shore's special qualities include waterfalls in summer, ice formations in winter; miniature evergreen trees and some very old evergreens growing out of the steep cliffs. 2 km hiking trail providing walking and pedestrian access to the Ottawa River.<br><br>The City, through purchase of service arrangements with the Kanata Nordic Ski Club, also supports the grooming of cross-country ski trails at the park |

| | | | |
|---|---|---|---|
| **Kizell Wetland** | Kanata North, Ottawa | tbc | The provincially significant Kizell wetland, which includes the area known as the beaver pond, has been integrated into the community of Kanata Lakes. Pathways have been developed on both sides of the wetland for hiking, dog walking, jogging, skiing, snowshoeing. |

## Appendix F: Other Conservation Properties

| **Owner/ Operator** | **Name and Designation** *(where applicable)* | **Location** | **Landscape Type(s)** | **Uses and Other Details** | **Size (ha)** |
|---|---|---|---|---|---|
| Environment and Climate Change Canada | Mississippi Lake National Wildlife Area & Mississippi Lake Migratory Bird Sanctuary | Drummond / North Elmsley Twp. | forest, lakeshore and wetland | Designated to protect habitat for staging waterfowl. Day use only. Activities limited to seasonal recreational boating from the boat launch and sport fishing. These activities are prohibited between Sept 15 and Dec 15 except for directly accessing Mississippi Lake to provide a safe, undisturbed refuge for staging migratory waterfowl. | 307 |
| Lanark County | Lanark County Community Forest sites | Lanark Highlands, Mississippi Mills and DNE | pine plantations, other forested lands, wetland, etc. | | Approx. 4000 |
| North Frontenac Township | North Frontenac Dark Sky Preserve | North Frontenac Twp. | night sky | | |

# Appendix G: Summary Descriptions of Core Natural Areas (CNAs)

| **1. Mazinaw Forest & Wetlands,** Twps. of North Frontenac & Addington Highlands | **Key Features** | |
|---|---|---|
| This core natural area is ~28,530 ha and is primarily owned by the Crown. Most of the area is part of the larger Mazinaw Lanark Managed Forest.<br><br>Roughly 80% of the area is forested (20% old growth) and 16% of this area is covered by swamps and other types of wetlands. It also includes over 600 ha of open water.<br><br>**Existing parks and recreation**: Bon Echo Provincial Park<br>**Community associations**: Mazinaw Property Owners Association, Buckshot Lake Association, Shabomeka Lake Association, Mississagagon Lake Association, and Friends of Bon Echo Provincial Park.<br>**CA stewardship sites**: 66 Lake Tree Day participants and 2 shoreline plantings in association with the Mazinaw Property Owners Association.<br>**Sensitive cold-water habitat in the area**: McCauseland Lake, Mazinaw Lake, Mississagagon Lake, Kishkebus Lake, Shabomeka Lake, Buckshot Lake, Blue Lake, and Donnelly Creek.<br>**Potential local species include**:<br>• **Cold water fish**: Lake Trout, Lake White Fish, Lake Herring, Rainbow Trout<br>• **Keystone species**: Wolves, Moose, Black Bears<br>• **Area Includes quality habitat for the following species**: Algonquin Wolf, Five-lined Skink, Peregrine Falcon, Blanding's Turtle, Evening Grosbeak, Least Bittern, Monarch, Redheaded Woodpecker, Wood Thrush. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 2% |
| | **Cold Water Habitat** | Yes |
| | **% Crown/Public/Trust** | 81% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Crown Land |
| | **Secondary Design.** | Rural |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | n/a |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **2. Cloyne Forest,** Twp. of North Frontenac | **Key Features** | |
|---|---|---|
| This core natural area is ~490 ha with over 60% in private ownership.<br><br>Roughly 68% of the area is forested, 29% is covered by swamps and other types of wetlands, and includes over 7 ha of open water. Over 17% of the forested area is old growth.<br><br>**Potential local species include**:<br>• **Keystone species**: Wolves, Moose, Black Bears<br>• **Area Includes quality habitat for the following species**: Eastern Whippoorwill, Eastern Wood-Pewee, Wood Thrush, Evening Grosbeak, Monarch, Redheaded Woodpecker, Wood Thrush, bats. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 3% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 37% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Crown Land |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | n/a |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **3. Clarendon/Barrie Managed Forest,** Twps. of North Frontenac & Central Frontenac | **Key Features** | |
|---|---|---|
| This core natural area is ~5,342 ha and is primarily owned by the Crown.<br><br>Roughly 73% is forested with over 20% of old growth forest remaining. Another ~24% of the area is swamps and other wetlands, including over 300 ha of open water.<br><br>**Existing parks and recreation**: North Frontenac Parklands<br>**Community associations**: Kashwakamak Lake Association, Big Gull Lake Association, and Malcolm-Ardoch Lake Association.<br>**CA stewardship sites**: There have been 110 Lake Tree Day participants in this area on Big Gull Lake and Kashwakamak Lake.<br>**Sensitive cold-water habitat in the area**: Big Gull Lake<br>**Potential local species include**:<br>• **Cold water fish**: Lake Whitefish, Lake Herring<br>• **Keystone species**: Moose, Black Bears<br>• **Area Includes quality habitat for the following species**: Five-lined Skink, Blanding's Turtles, Snapping Turtle, Evening Grosbeak, Least Bittern, Monarch, Redheaded Woodpecker, Wood Thrush, bats. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 3% |
| | **Cold Water Habitat** | Yes |
| | **% Crown/Public/Trust** | 89% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Crown Land |
| | **Secondary Design.** | Mineral |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | 1 |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **4. Proposed Whiteduck Provincial Park & Conservation Reserve,** Twp. of North Frontenac | **Key Features** | |
|---|---|---|
| This core natural area is ~15,312 ha and is primarily owned by the Crown.<br><br>Roughly 82% of the area is forested and another 15% is swamp and other wetlands. It also includes over 300 ha of open water.<br><br>**Existing parks and recreation**: North Frontenac Parklands<br>**Sensitive cold-water habitat in the area**: Black Creek is cool-warm<br>**Potential local species include**:<br>• **Keystone species**: Moose, Black Bears<br>• **Area Includes quality habitat for the following species**: Five-lined Skink, Wood Thrush, Snapping Turtle, Painted Turtle, Blanding's Turtle, bats, Evening Grosbeak, Least Bittern, other forest birds, Redheaded Woodpecker, Monarch, Wood Thrush. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 3% |
| | **Cold Water Habitat** | Yes |
| | **% Crown/Public/Trust** | 61% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Crown Land |
| | **Secondary Design.** | Mineral |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | n/a |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **5. Upper Clyde Forest,** Twps. of North Frontenac, Lanark Highlands & Greater Madawaska | **Key Features** | |
|---|---|---|
| This core natural area is ~15,258 ha and is primarily owned by the Crown with ~142 ha owned by a Land Trust.<br><br>Roughly 83% of the area is forested, with over 30% of old growth forest remaining. Around 15% of the area is swamp and other wetlands and includes over 200 ha of open water.<br><br>**PSW**: Joe's Lake PSW<br><br>**ANSI**: Summit Lake (Life Science, Provincial), Summit Lake (Life Science, Provincial), Plevna Cedar Swamp (Life Science, Regional) and Palmerston Lake (Life Science, Provincial)<br><br>**Existing parks and recreation**: Palmerston-Canonto Conservation Area, North Frontenac Parklands<br>**Community associations**: Palmerston Lake Association, Canonto Lake Association, Mosque Lake Association, and Grindstone Lake Association.<br>**CA stewardship sites**: 30 Lake Tree Day participants across Palmerston and Canonto Lakes and 10 shoreline plantings<br>**Sensitive cold-water habitat in the area**: Grindstone Lake, Mosque Lake, Palmerston Lake, Summit Lake, and Graham Creek.<br>**Potential local species include**:<br>• **Cold water fish**: Lake Trout, Lake Herring, Rainbow Trout<br>• **Keystone species**: Moose, Black Bears<br>• **Area Includes quality habitat for the following species**: Five-lined Skink, Blanding's Turtle, other turtles, bats, Evening Grosbeak, Least Bittern, Eastern Whippoorwill, Monarch, Redheaded Woodpecker, Wood Thrush. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 2% |
| | **Cold Water Habitat** | Yes |
| | **% Crown/Public/Trust** | 66% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Crown Land |
| | **Secondary Design.** | Rural |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | 1 |
| | **Approved ANSI** | 4 |
| | **Proposed ANSI** | n/a |

| **6. Olden Forest,** Twp. of Central Frontenac | **Key Features** | |
|---|---|---|
| This core natural area is ~1,517 ha and is primarily privately owned.<br><br>Roughly 73% of the area is forested, and another 21% is swamp and other wetlands. It also includes over 20 ha of open water and over 8 ha of meadow thicket.<br><br>**Community associations**: Sharbot Lake Property Owners Association<br>**CA stewardship sites**: 43 Lake Tree Day participants around Sharbot Lake<br>**Sensitive cold-water habitat in the area**: Sharbot Lake<br>**Potential local species include**:<br>• **Cold-water fish**: Lake Whitefish, Lake Herring, Lake Trout<br>• **Keystone species**: Moose, Black Bears<br>• **Area Includes quality habitat for the following species**: Wood Thrush, Snapping Turtle, Blanding's Turtle, bats, Least Bittern, Evening Grosbeak, Monarch, Redheaded Woodpecker, Short-eared Owl, Wood Thrush, forest birds. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 6% |
| | **Cold Water Habitat** | Yes |
| | **% Crown/Public/Trust** | 17% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Crown Land |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | n/a |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **7. Boundary Cr / Hungry Lk CR,** Twp. of Central Frontenac | **Key Features** | |
|---|---|---|
| This core natural area is ~3,596 ha and is primarily designated as Rural Lands. Roughly 65% of the area is forested (3% old growth), and another 34% covered by swamps and other types of wetlands. It also includes about 12 ha of open water.<br><br>**ANSI**: Harlowe Bog (Life Science, Regional) and Hungry Lake Barrens (Life Science, Provincial)<br><br>**Existing parks and recreation**: North Frontenac Parklands<br>**Community associations**: Big Gull Lake Association<br>**CA stewardship sites**: 30 Lake Tree Day participants around Big Gull Lake<br>**Sensitive cold-water habitat in the area**: Big Gull Lake<br>**Potential local species include**:<br>• **Cold water fish**: Burbot, Lake Herring, Lake Whitefish<br>• **Keystone species**: Moose, Black Bears, Deer<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, Evening Grosbeak, Least Bittern, Monarch, Redheaded Woodpecker, Wood Thrush. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 1% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 34% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Mineral |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | n/a |
| | **Approved ANSI** | 2 |
| | **Proposed ANSI** | n/a |

| **8. Frontenac Linkage Forest,** Twp. of Central Frontenac | **Key Features** | |
|---|---|---|
| This core natural area is ~7,249 ha with over 60% in private ownership.<br><br>Roughly 73% of the area is forested (8% old growth) and another 22% is swamp and other wetlands. It also includes over 90 ha of open water.<br><br>**ANSIs**: The area also includes the Hungry Lake Barrens (Life Science, Provincial)<br><br>**Existing parks and recreation**: Sharbot Lake Provincial Park is nearby.<br>**Community associations**: Sharbot Lake Property Owners Association<br>**Sensitive cold-water habitat in the area**: Sharbot Lake and White Lake<br>**Potential local species include**:<br>• **Cold-water fish**: Lake Whitefish, Lake Herring, Lake Trout<br>• **Keystone species**: Moose, Black Bears<br>• **Area Includes quality habitat for the following species**: Five-lined Skink, Blanding's Turtles, Snapping Turtle, Least Bittern, Evening Grosbeak, Monarch, Redheaded Woodpecker, Short-eared Owl, Wood Thrush, bats.<br>**Other Features of Note**: The MNR White Lake Fish Hatchery and fish sanctuary are within this area. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 4% |
| | **Cold Water Habitat** | Yes |
| | **% Crown/Public/Trust** | 39% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Crown Land |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | n/a |
| | **Approved ANSI** | 1 |
| | **Proposed ANSI** | n/a |

| **9. Oso Forest,** Twp. of Central Frontenac | **Key Features** | |
|---|---|---|
| This core natural area is ~1,400 ha and is primarily privately owned.<br><br>The majority of the area is forested (82%), and another 15% is swamp and other wetlands. It also includes over 15 ha of meadow thicket and over 6 ha of open water.<br><br>**Sensitive cold-water habitat in the area**: Black Creek is cool-warm<br>**Potential local species include**:<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, Five-lined Skink, Evening Grosbeak, Least Bittern, Monarch, Redheaded Woodpecker, Wood Thrush, bats, other forest birds. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 2% |
| | **Cold Water Habitat** | Yes |
| | **% Crown/Public/Trust** | 9% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Mineral |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | n/a |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **10. Bolton Creek Corridor,** Twps. of Lanark Highlands, Tay Valley, & Central Frontenac | **Key Features** | |
|---|---|---|
| This core natural area is ~7,400 ha with over 80% of the land in private ownership and includes Bolton Creek, Paul's Creek and Long Sault Creek.<br><br>The area is roughly 1/3rd swamp wetlands with the balance primarily forested. The area includes approximately 350 ha old forest growth.<br><br>**PSW**: Bolton Creek PSW<br><br>**Sensitive cold-water habitat in the area**: Bolton Creek, Paul's Creek, Long Sault Creek<br>**Potential local species include**:<br>• **Cold water fish**: Burbot, Brook Trout<br>• **Keystone species**: Black Bear, Deer<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, bats, Evening Grosbeak, Least Bittern, Monarch, Redheaded Woodpecker, Short-eared Owl, Wood Thrush. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 1% |
| | **Cold Water Habitat** | Yes |
| | **% Crown/Public/Trust** | 17% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Mineral |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | 1 |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |
| **11. Fall River,** Twps. of Central Frontenac & Tay Valley | **Key Features** | |
| This core natural area is ~3332 ha and is primarily privately owned.<br><br>Roughly 69% is forested, and another 22% is swamp and other wetlands. It also includes over 23 ha of meadow thicket and over 7 ha of open water.<br><br>**PSW:** Upper Fall River PSW, Little Mud Lake Wetland, Silver Lake Wetland<br><br>**ANSI:** Maberly Bog (Candidate Life Science, Regional)<br><br>**Existing parks and recreation**: Silver Lake Provincial Park<br>**Community associations**: Sharbot Lake Property Owners Association, and Silver Lake Association<br>**CA stewardship sites**: 1 tree planting project through RVCA, 24 Lake Tree Day participants around Silver Lake<br>**Sensitive cold-water habitat in the area**: Silver Lake<br>**Potential local species include**:<br>• **Cold-water fish**: Lake Trout, Lake Whitefish, Lake Herring<br>• **Keystone Species**: Black Bear, Deer<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, Grey Ratsnake, Monarch, Snapping Turtle, bats, Least Bittern, Evening Grosbeak, other forest birds, Monarch, Redheaded Woodpecker, Short-eared Owl, Wood Thrush. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 8% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 3% |
| | **% Agricultural** | 1% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Mineral |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | 2 |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | 1 |

| **12. Red Rock Wetlands,** Tay Valley Township | **Key Features** | |
|---|---|---|
| This core natural area is ~1,060 ha and lies where the Clyde River and Fall River discharge to the Mississippi River. It is off-shield almost 2/3rds wetland including the Playfairville Mud Lake Wetland Complex. Over 80% of the land is in private ownership, and there remains ~ 80 ha of old growth.<br><br>**PSW**: Playfairville Mud Lake Wetland Complex<br><br>**Community associations**: Lanark Fish and Game Club<br>**Potential local species include**:<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, other turtles (snapping, musk), amphibians, least bittern, Evening Grosbeak, Least Bittern, Monarch, Redheaded Woodpecker, Short-eared Owl, Wood Thrush. | **Main Land Use** | Wetlands & Forest |
| | **% Open Water** | 13% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 13% |
| | **% Agricultural** | 1% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Sign. Wooded Area |
| | **Secondary Design.** | Rural |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | 1 |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **13. Fallbrook Cambrian Shield,** Tay Valley Township | **Key Features** | |
|---|---|---|
| This core natural area is ~2,160 ha of which 17% is wetlands including the Bennett Lake PSW. There is approximately 180 ha of old growth within the forested area.<br><br>**PSW**: Bennett Lake PSW<br><br>**Community associations**: Bennett and Fagan Lake Association<br>**CA stewardship sites**: 24 Lake Tree Day participants, 3 shoreline plantings, 1 tree planting project<br>**Sensitive cold-water habitat in the area**: Limekiln Creek is cool water habitat<br>**Potential local species include**:<br>• **Keystone species**: Bear, Deer<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, Evening Grosbeak, Least Bittern, other forest birds, bats, Monarch, Redheaded Woodpecker, Short-eared Owl, Wood Thrush. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 3% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 0% |
| | **% Agricultural** | 2% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Mineral |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | 1 |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **14. Harper Lowlands,** Tay Valley Township | **Key Features** | |
|---|---|---|
| This core natural area is ~350 ha of which 1/3 is wetlands. The balance is primarily forest with roughly an equal split of deciduous and coniferous species. This area is distinct from the CNA 13 in that it is off-shield and provides different habitat opportunities.<br><br>It's associated Linkage Area consists of ~680 ha of which includes 129 ha of forest, 31 ha of wetlands, 288 ha of agricultural and 29 ha of rural lands. This Linkage Area is primarily designated as Rural Lands.<br><br>**CA Stewardship Sites**: 2 tree planting projects<br>**Observed species include**:<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, Evening Grosbeak, Least Bittern, Monarch, Redheaded Woodpecker, Short-eared Owl, Wood Thrush. | **Main Land Use** | Forest & Wetland |
| | **% Open Water** | 2% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 0% |
| | **% Agricultural** | 1% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Natural Heritage |
| | **Secondary Design.** | Rural |
| | **Dominant Tree Cover** | Mixed |
| | **Approved PSW** | n/a |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **15. Lanark Block,** Twp. of Lanark Highlands | **Key Features** | |
|---|---|---|
| This core natural area is ~18,736 ha with over 70% in private ownership. It also has over 900 ha of public land.<br><br>Roughly 78% of the area is forested, and another 20% is swamp and other wetlands. It also includes over 300 ha of open water and over 60 ha of meadow thicket.<br><br>**PSW**: Stump Lake PSW, McCulloch's Mud Lake PSW, and Joe's Lake PSW<br><br>**ANSI**: Snow Road Station Esker (Life Science, Earth Science, Provincial)<br><br>**Existing parks and recreation**: Purdon Conservation Area<br>**Community associations**: Dalhousie Lake Association, Patterson Lake Cottage Association, Robertson Lake Association.<br>**CA stewardship sites**: There have been 40 Lake Tree Day participants, 2 shoreline plantings<br>**Sensitive cold-water habitat in the area**: Mosquito Creek and Easton's Creek<br>**Potential local species include**:<br>• **Cold water fish**: Brook Trout, Burbot<br>• **Keystone species**: Black Bear, Deer, Turkey<br>**Area Includes quality habitat for the following species**: Five-lined Skink, Evening Grosbeak, bats, Least Bittern, Monarch, Short-eared Owl, Wood Thrush, other forest birds. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 2% |
| | **Cold Water Habitat** | Yes |
| | **% Crown/Public/Trust** | 30% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Crown Land |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | 3 |
| | **Approved ANSI** | 1 |
| | **Proposed ANSI** | n/a |

| **16. West Clyde Forest,** Twp. of Lanark Highlands | **Key Features** | |
|---|---|---|
| This core natural area is ~2,700 ha, lies between Highway 511 and the Clyde River, and is approximately 98% in private ownership. It is on-shield and almost 1,900 ha is forested with a mix of coniferous and deciduous trees, including ~700 ha. old growth.<br><br>**Existing parks and recreation**: Baird Trail<br>**Community associations**: Lanark Fish and Game Club<br>**Sensitive cold-water habitat in the area**: Easton's Creek<br>**Potential local species include**:<br>• **Cold water fish**: Burbot, Brook Trout<br>• **Keystone species**: Black Bear, Deer<br>• **Area Includes quality habitat for the following species**: Evening Grosbeak, Least Bittern, Monarch, Redheaded Woodpecker, Short-eared Owl, Wood Thrush. | **Main Land Use** | Forest |
| | **% Open Water** | 3% |
| | **Cold Water Habitat** | Yes |
| | **% Crown/Public/Trust** | 2% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Urban |
| | **Dominant Tree Cover** | Mixed |
| | **Approved PSW** | n/a |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **17. Middle Clyde Forest,** Twps. of Lanark Highlands & Greater Madawaska | **Key Features** | |
|---|---|---|
| This core natural area is ~10,252 ha with over 70% in private ownership. 509 ha of this area is owned by a Land Trust.<br><br>Roughly 84% is forested, and another 15% is swamp and other wetlands. It also includes over 100 ha of open water and over 39 ha of meadow thicket.<br><br>**PSW**: Joe's Lake PSW<br><br>**Existing parks and recreation**: Blueberry Mountain<br>**Sensitive cold-water habitat in the area**: Green Lake<br>**Potential local species include**:<br>• **Cold water fish**: Brook Trout, Rainbow Trout, Brown Trout<br>• **Keystone species**: Beaver, Moose<br>**Area Includes quality habitat for the following species**: Snapping Turtle, Blanding's Turtle, *bats,* Evening Grosbeak, Least Bittern, Monarch, Redheaded Woodpecker, Short-eared Owl, Wood Thrush, other forest birds. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 1% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 28% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Crown Land |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | 1 |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **18. Clayton-Quinn Corridor,** Twps. of Lanark High, Drummond N. Elm., Miss. Mills, Beck. | **Key Features** | |
|---|---|---|
| This core natural area is ~ 5,100 ha of forest and wetlands with almost 730 ha old growth. The area includes portions of County of Lanark Forest.<br><br>**PSW**: Clayton-Taylor Lake PSW, Gillies Lake-Kerr Lake PSW, Ramsbottom Lake PSW<br><br>**CA stewardship sites**: 6 tree planting projects, 2 shoreline plantings<br>**Potential local species include**:<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, Evening Grosbeak, Least Bittern, Monarch, Redheaded Woodpecker, Short-eared Owl, Wood Thrush. | **Main Land Use** | Forest & wetlands |
| | **% Open Water** | 9% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 9% |
| | **% Agricultural** | 1% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Mineral |
| | **Dominant Tree Cover** | Mixed |
| | **Approved PSW** | 3 |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **19. Ferguson Falls Lowlands,** Twps. of Lanark Highlands & Drummond North Elmsley | **Key Features** | |
|---|---|---|
| This core natural area is over 3,700 ha and lies at the inlet to Mississippi Lake. It is mostly privately owned and comprises od several important natural features including over 800 ha of old growth forest.<br><br>**Significant nature reserves in the area include**:<br>• The Mississippi Lake Migratory Bird Sanctuary (Federal) at McEwen Bay<br>• Poole Family Nature Sanctuary and Blue Heron Wetlands (Mississippi Madawaska Land Trust)<br><br>**PSW**: Steward Lake-Haley Lake PSW, McEwen Bay PSW, and Scotch Corners Wetland Complex<br><br>**ANSI**: Innisville Wetlands (Life Science), Perth Blueberry Bog (Candidate)<br><br>**Existing parks and recreation**: Ferguson's Falls canoe launch<br>**Community associations**: Mississippi Lakes Association<br>**CA stewardship sites**: 2 tree planting projects, 2 shoreline plantings<br>**Potential local species include**:<br>• **Keystone species**: Fisher, Black Bear<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, Evening Grosbeak, Least Bittern, Monarch, Redheaded Woodpecker, Short-eared Owl, Wood Thrush. | **Main Land Use** | Wetlands |
| | **% Open Water** | 4% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 1% |
| | **% Agricultural** | 1% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Urban |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | 3 |
| | **Approved ANSI** | 1 |
| | **Proposed ANSI** | 1 |

| **20. McIntyre Creek Corridor,** Twp. of Drummond North Elmsley | **Key Features** | |
|---|---|---|
| This core natural area is ~440 ha of primarily wetland swamp and includes Blueberry Marsh PSW. All of this area is privately owned.<br><br>PSW: Blueberry Marsh PSW<br><br>**Existing parks and recreation**: Creek outlets at the Mississippi Lake National Wildlife Area and boat launch<br>**Community associations**: Mississippi Lakes Association<br>**Potential local species include**:<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, Evening Grosbeak, Grey Ratsnake, Least Bittern, Monarch, Short-eared Owl, Wood Thrush. | **Main Land Use** | Swamp Wetland |
| | **% Open Water** | 0% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 0% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Urban |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | 1 |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **21. Tennyson Wetlands,** Beckwith Township | **Key Features** | |
|---|---|---|
| This core natural area is just over 1,000 ha and is roughly 50% swamp wetland including the Black Creek PSW. The area is off-shield and has a remnant area of old growth forest. All of this area is privately owned.<br><br>**PSW**: Black Creek PSW<br><br>**Community associations**: Mississippi Lakes Association<br>**Observed species include**:<br>• **Keystone species**: Osprey, Black Bear<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, Least Bittern, Evening Grosbeak, Least Bittern, Monarch, Redheaded Woodpecker, Short-eared Owl, Wood Thrush. | **Main Land Use** | Swamp Wetland |
| | **% Open Water** | 0% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 0% |
| | **% Agricultural** | 2% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Agriculture |
| | **Dominant Tree Cover** | Mixed |
| | **Approved PSW** | 1 |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **22. Carleton Place Wetlands,** Beckwith Township & Town of Carleton Place | **Key Features** | |
|---|---|---|
| This core natural area is ~250 ha and an equal mix of wetland and forest. All of this area is privately owned.<br><br>**Existing parks and recreation**: Beckwith Trail<br>**Potential local species include**:<br>• **Keystone species**: Northern Pike<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, Least Bittern, Evening Grosbeak, Least Bittern, Monarch, Redheaded Woodpecker, Short-eared Owl, Wood Thrush. | **Main Land Use** | Wetland & Forest |
| | **% Open Water** | <0% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 0% |
| | **% Agricultural** | 1% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Agricultural |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | n/a |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **23. Quarry Road Wetland,** Municipality of Mississippi Mills | **Key Features** | |
|---|---|---|
| This core natural area is ~530 ha of predominantly deciduous forest, of which there is a small area of old growth. All of this area is privately owned.<br><br>**CA stewardship sites**: 1 tree planting project<br>**Sensitive cold-water habitat in the area**:<br>**Potential local species include**:<br>• **Keystone species**: Fisher, Black Bear, Northern Pike<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, Evening Grosbeak, Least Bittern, Monarch, Redheaded Woodpecker, Short-eared Owl, Wood Thrush. | **Main Land Use** | Forest & Wetland |
| | **% Open Water** | 0% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 0% |
| | **% Agricultural** | 2% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Agriculture |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | n/a |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **24. Wolf Grove Wetlands,** Municipality of Mississippi Mills | **Key Features** | |
|---|---|---|
| This core natural area is ~804 ha and is primarily designated Rural Lands. Roughly 85% of the area is forested, and another 15% covered by swamps and other types of wetlands.<br><br>PSW: Wolf Grove PSW Complex<br><br>**CA stewardship sites**: 1 tree planting project<br>**Sensitive cold-water habitat in the area**:<br>**Potential local species include**:<br>• **Cold water fish**: Mottled sculpin<br>• **Keystone species**: Black Bear, turtles<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, Evening Grosbeak, Least Bittern, Monarch, Redheaded Woodpecker, Short-eared Owl, Wood Thrush. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 0% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 11% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Signif. Woodlands |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | 1 |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **25. Pakenham Managed Forest,** Municipality of Mississippi Mills & Twp. of Lanark Highlands | **Key Features** | |
|---|---|---|
| This core natural area is ~12,000 ha and is primarily designated Rural Lands. Roughly 71% of the area is forested, and another 26% covered by wetlands. It also includes over 276 ha of open water.<br><br>**PSW**: Pakenham Highlands PSW Complex, Clayton-Taylor PSW Complex<br><br>**CA stewardship sites**: 2 shoreline plantings<br>**Potential local species include**:<br>• **Keystone species**: Great Blue Heron, Osprey, Black Bear<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, Evening Grosbeak, Least Bittern, Monarch, Redheaded Woodpecker, Short-eared Owl, Wood Thrush. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 2% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 20% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Crown |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | 2 |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **26. Pakenham Highlands,** Municipality of Mississippi Mills | **Key Features** | |
|---|---|---|
| This core natural area is ~7,000 ha and is primarily designated Rural Lands.<br><br>The area includes the Pakenham Highlands PSW Complex. Roughly 74% of the area is forested (1% old growth), and another 26% covered by swamps and other types of wetlands. It also includes about 2 ha of open water.<br><br>**PSW**: Pakenham Highlands PSW Complex<br><br>**Existing parks and recreation**: Pakenham Ski Hill, High Lonesome Nature Reserve MLT property<br>**CA stewardship sites**: 2 tree planting projects<br>**Potential local species include**:<br>• **Keystone species**: Osprey, Great Blue Heron, Black Bear<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, other turtles, amphibians, Evening Grosbeak, Least Bittern, Monarch, Redheaded Woodpecker, Wood Thrush. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 0% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 6% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Mineral |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | 1 |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **27. Cedar Hill,** Municipality of Mississippi Mills | **Key Features** | |
|---|---|---|
| This core natural area is ~450 ha and is primarily designated Rural Lands.<br><br>Roughly 76% of the area is forested (5% being old growth), and another 24% covered by wetlands.<br><br>**CA stewardship sites**: 1 shoreline planting<br>**Sensitive cold-water habitat in the area**: Indian Creek is cool-warm habitat<br>**Potential local species include:**<br>• **Keystone species**: Black Bear<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, Evening Grosbeak, Least Bittern, Monarch, Redheaded Woodpecker, Short-eared Owl, Wood Thrush. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 0% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 11% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Agriculture |
| | **Dominant Tree Cover** | Coniferous |
| | **Approved PSW** | n/a |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **28. Appleton Wetland,** Municipality of Mississippi Mills | **Key Features** | |
|---|---|---|
| This core natural area contains the Appleton PSW, is ~600 ha and is primarily designated Provincially Significant Wetland. Roughly 80% of the area is covered by swamps and other types of wetlands. It also includes about 109 ha of open water.<br><br>**PSW**: Appleton Wetland PSW<br><br>**ANSI**: Appleton Swamp (Candidate, Life Science, Provincial)<br><br>**Existing parks and recreation**: Mississippi Mills playground and boat launch<br>**CA stewardship sites**: 1 tree planting project<br>**Observed species include**:<br>• **Keystone species**: turtles, forest birds<br>• **Area Includes quality habitat for the following species**: American Eel, Blanding's Turtle, Least Bittern, Monarch, Short-eared Owl. | **Main Land Use** | Wetland |
| | **% Open Water** | 18% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 0% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | PSW |
| | **Secondary Design.** | Agriculture |
| | **Dominant Tree Cover** | Deciduous |
| | **Approved PSW** | 1 |
| | **Approved ANSI** | 1 |
| | **Proposed ANSI** | n/a |

| **29. Ottawa Block,** Municipality of Mississippi Mills & City of Ottawa | **Key Features** | |
|---|---|---|
| This core natural area is over 10,000 ha and is primarily designated Rural Lands. Roughly 59% of the area is forested (15% old growth), and another 27% covered by swamps and other types of wetlands. It also includes about 17 ha of open water.<br><br>It's associated Linkage Area consists of ~320 ha of which includes 174 ha of forest, 56 ha of agricultural and 14 ha of rural lands.<br><br>The Goulbourn Wetland is headwaters to the cool-cold Poole Creek and contains Brown Trout (by MNR). This area has been identified as providing a possible fen habitat for species such as the Bugbean Buckmoth.<br><br>**PSW**: Goulbourn, Huntley, Manion Corners Long Swamp, East Burnt Lands, and Corkery Creek Wetland Complexes.<br><br>**ANSI**: Manion Corners Long Swamp Fen (Life Science, Provincial), Panmure Alvar (Candidate, Life Science, Regional), Highway 17 Fossils (Earth Science, Provincial), Marathon Forest (Candidate, Life Science, Provincial) and Burnt Lands Alvar (Life Science, Provincial).<br><br>**Existing parks and recreation**: City of Ottawa Park Corridors, Trans-Canada Trail<br>**Community associations**: Friends of Stittsville Wetlands<br>**CA stewardship sites**: 28 shoreline plantings around Poole Creek<br>**Sensitive cold-water habitat in the area**: Poole Creek<br>**Potential local species include**:<br>• **Cold water fish**: Brown Trout, Mottled Sculpin<br>• **Keystone species**: Fisher, Black Bear<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, other turtles, bats, Bugbean Buckmoth, Evening Grosbeak, Least Bittern, Peregrine Falcon, Redheaded Woodpecker, Short-eared Owl, Wood Thrush, meadow and forest birds. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 0% |
| | **Cold Water Habitat** | Yes |
| | **% Crown/Public/Trust** | 9% |
| | **% Agricultural** | 1% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Mineral |
| | **Approved PSW** | 5 |
| | **Approved ANSI** | 4 |
| | **Proposed ANSI** | n/a |

| **30. Carp Hills,** City of Ottawa | **Key Features** | |
|---|---|---|
| This core natural area is ~5,000 ha and is primarily designated Rural Lands. Roughly 65% of the area is forested (3% old growth), and another 30% covered by swamps and other types of wetlands. It also includes about 7 ha of open water.<br><br>It's associated Linkage Area consists of ~3580 ha of which includes 1035 ha of forest, 338 ha of wetlands, 1131 ha of agricultural and 256 ha of rural lands. This Linkage Area is primarily designated Rural Lands.<br><br>This area has been identified as providing a possible fen habitat for species such as the Bugbean Buckmoth.<br><br>**PSW**: Carp Hills Wetland Complex, the Kilmaur's Marsh, and South Marsh Highlands Wetland.<br><br>**ANSI**: South March Highlands (Candidate, Life Science, Provincial), Carp Hills (Candidate, Life Science, Regional) and Carp Barrens (Candidate, Life Science, Provincial).<br><br>**Existing parks and recreation**: Carp Hills and South March Highlands City of Ottawa Conservation Area<br>**Community associations**: Friends of the Carp River<br>**CA stewardship sites**: 20 tree planting projects and 28 ORCWP Projects<br>**Potential local species include**:<br>• **Keystone species**: Osprey, Fisher, Black Bear<br>• **This area has also been identified as quality habitat for the following species**: Blanding's Turtle, Least Bittern, Bugbean Buckmoth, Evening Grosbeak, Least Bittern, Monarch, Peregrine Falcon, Short-eared Owl, Wood Thrush. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 0% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 25% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Urban |
| | **Approved PSW** | 3 |
| | **Approved ANSI** | 3 |
| | **Proposed ANSI** | n/a |

| **31. Chats Fall/Fitzroy,** City of Ottawa | **Key Features** | |
|---|---|---|
| This core natural area is ~1,923 ha and is primarily designated Rural Lands. Roughly 64% of the area is forested (4% old growth), and another 17% covered by swamps and other types of wetlands. It also includes about 95 ha of open water.<br><br>**PSW**: Morris Island Wetland Complex<br><br>**ANSI**: Lavergne Bay Shores (Candidate, Life Science, Regional), Morris Island Conservation Area (Candidate, Life Science, Provincial), Mississippi Snye Wetland (Candidate, Life Science, Provincial).<br><br>**Existing parks and recreation**: Fitzroy Provincial Park, Morris Island Conservation Area<br>**Community associations**: Galetta Community Association<br>**CA stewardship sites**: 2 tree planting projects, and 16 ORCWP Projects<br>**Potential local species include**:<br>• **Keystone species**: Osprey, forest birds, turtles<br>• **Area Includes quality habitat for the following species**: American Eel, River Redhorse, Blanding's Turtle, Map Turtle, Evening Grosbeak, Least Bittern, Monarch, Peregrine Falcon, Short-eared Owl, Wood Thrush. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 5% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 21% |
| | **% Agricultural** | 1% |
| | **% Pits or Quarry** | 1% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Urban |
| | **Approved PSW** | 1 |
| | **Approved ANSI** | 3 |
| | **Proposed ANSI** | n/a |

| **32. Crown Point,** City of Ottawa | **Key Features** | |
|---|---|---|
| This core natural area is ~1,580 ha and is primarily designated Rural Lands. Roughly 68% of the area is forested (8% old growth), and another 17% covered by swamps.<br><br>**Existing parks and recreation**: Camp Capital<br>**Community associations**: Constance and Buckham's Bay Community Association<br>**CA stewardship sites**: 2 tree planting projects, 1 ORCWP project<br>**Potential local species include**:<br>• **Keystone species**: Forest Birds<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, Evening Grosbeak, Least Bittern, Monarch, Short-eared Owl, Wood Thrush. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 0% |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 0% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Mineral |
| | **Approved PSW** | n/a |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **33. Torbolton Forest,** City of Ottawa | **Key Features** | |
|---|---|---|
| This core natural area is ~300 ha and is primarily designated Rural Lands. Roughly 92% of the area is forested, and another 3% covered by wetlands.<br><br>**ANSI**: Constance Bay Sandhills (Earth Science, Provincial)<br><br>**Existing parks and recreation**: Torbolton Forest City of Ottawa Conservation Area<br>**Community associations**: Constance and Buckham's Bay Community Association<br>**CA stewardship sites**: 1 tree planting project, 17 shoreline plantings, 9 ORCWP projects<br>**Potential local species include**:<br>• **Keystone species**: Osprey, Black Bear, pine forest birds<br>• **Area Includes quality habitat for the following species**: Blanding's Turtle, Evening Grosbeak, Least Bittern, Monarch, Short-eared Owl, Wood Thrush, bats. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | n/a |
| | **Cold Water Habitat** | No |
| | **% Crown/Public/Trust** | 69% |
| | **% Agricultural** | 0% |
| | **% Pits or Quarry** | 0% |
| | **Primary OP Design.** | Rural |
| | **Secondary Design.** | Urban |
| | **Approved PSW** | 1 |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

| **34. March Twp. Riverine Corridors,** City of Ottawa | **Key Features** | |
|---|---|---|
| This core natural area comprises three riverine corridors: Constance Creek, Shirley's Brook, and Watt's Creek, which has cold-cool headwaters. The area is ~4,600 ha of which almost 1,600 ha is forested and over 2,100 ha are wetlands. Of the roughly 50% owned by the Crown, most is owned by the federal government and lies within the National Capital Commission's Greenbelt.<br><br>Roughly 34% of the area is forested (2% old growth), and another 46% covered by swamps and other types of wetlands. It also includes about 193 ha of open water.<br><br>**PSW**: Stony Swamp Wetland Complex, Mud Pond PSW, and Constance Creek PSW<br><br>**ANSI**: Shirley's Bay (Life Science), Campbells Quarry (Earth Science), Eagleson S. Corners (Earth Science), Constance Creek Wetland (Life Science), and Stony Swamp (Candidate, Life Science)<br><br>**Existing parks and recreation**: the NCC green belt, Sheila McKee Memorial Park, Phiney's Point, Bonnenfant YMCA Outdoor Education Centre aka Camp Otonabee, Ottawa River Canoe Club.<br>**CA stewardship sites**: 13 tree planting projects, 12 Ottawa Rural Clean Water Program (ORCWMP) projects<br>**Sensitive cold-water habitat in the area**: The headwaters of Watt's Creek are cold-cool habitat, Shirley's Brook has some cold-cool habitat.<br>**Potential local species include**:<br>• **Cold water fish**: Burbot<br>• **Keystone species**: Osprey, Fisher, Black Bear | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 4% |
| | **Cold Water Habitat** | Yes |
| | **% Crown/Public/Trust** | 51% |
| | **% Agricultural** | 3% |
| | **% Pits or Quarry** | 1% |
| | **Primary OP Design.** | Urban and Rural |
| | **Secondary Design.** | Environmental |
| | **Approved PSW** | 3 |
| | **Approved ANSI** | 4 |
| | **Proposed ANSI** | 1 |

| | | |
|---|---|---|
| • **Area Includes quality habitat for the following species**: Bugbean Buckmoth, Blanding's Turtle, Evening Grosbeak, Least Bittern, Monarch, Peregrine Falcon, Short-eared Owl, Wood Thrush.<br>**Other features of note**: The Department of National Defence Connaught Range at the outlets of Shirley's Brook and Watt's Creek is a large green space along the shore of the Ottawa River | | |

| **35. Lower Mississippi,** Municipality of Mississippi Mills & City of Ottawa | **Key Features** | |
|---|---|---|
| This core natural area is ~400 ha; roughly 32% of the area is forested (17% old growth), and another 35% covered by swamps and other types of wetlands. It also includes about 65 ha of open water. | **Main Land Use** | Forest & wetland |
| | **% Open Water** | 16% |
| | **Cold Water Habitat** | No |
| **Existing parks and recreation**: Canoe launch at Highway 17 | **% Crown/Public/Trust** | 0% |
| **CA stewardship sites**: 1 shoreline planting, 3 ORCWP projects, 3 tree planting projects (tbc) | **% Agricultural** | 7% |
| **Community associations**: Kinburn Community Association is nearby | **% Pits or Quarry** | 0% |
| **Potential local species include**: | **Primary OP Design.** | Mineral |
| • **Keystone species**: Deer, Bear, Northern Pike | **Secondary Design.** | Rural |
| • **Area Includes quality habitat for the following species**: River Redhorse, American Eel, Blanding's Turtle, Evening Grosbeak, Least Bittern, Monarch, Redheaded Woodpecker, Short-eared Owl, Wood Thrush. | **Approved PSW** | n/a |
| | **Approved ANSI** | n/a |
| | **Proposed ANSI** | n/a |

**Linkages identified in City of Ottawa Official Plan**

| Areas shown on Figure 5 | Total Area (ha) | Area of Forest Cover (ha) | Area of Wetland Cover (ha) | Area of Agricultural Land (ha) | Area of Rural Land (ha) | Primary OP Design. | Secondary OP Design. |
|---|---|---|---|---|---|---|---|
| Carp Hills Linkages | 3,359 | 1,033 | 320 | 1,200 | 146 | Rural | Urban |
| Carp River Linkages | 3,734 | 1,092 | 560 | 1,145 | 288 | Rural | Urban |
| Mississippi River Linkages | 2,571 | 446 | 24 | 1,575 | 119 | Urban | Rural |
| Ottawa River Linkages | 342 | 68 | 37 | 109 | 15 | Rural | Urban |

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# Discussion Paper

# Land Conservation Strategy

Mississippi Valley Conservation Authority

July 2024

# Introduction

The purpose of this document is to obtain community input during the develop of policies that will inform the acquisition, disposal, use, and management of lands owned by or under legal agreement with Mississippi Valley Conservation Authority (MVCA). Development of these policies is a requirement of O. Reg. 686/21 under the *Conservation Authorities Act,* which must be approved by MVCA's Board of Directors by the end of 2024.

MVCA's current inventory of land, easements, and other properties with legal agreements include:

- Dams and other water control structures
- Conservation Areas
- Lands acquired due to historic flooding
- Land used to support flood control infrastructure
- Land under natural heritage management trust agreements
- Land with erosion control structures

This document is designed to assist the communities served by these lands and structures to consider how MVCA may manage them in future. Five key questions are posed by this Discussion Paper:

1. What role should MVCA play in land conservation within its jurisdiction?
2. Should MVCA acquire more land for conservation purposes?
3. What type of facilities should MVCA operate?
4. What type of uses should MVCA permit at its Conservation Areas?
5. How should MVCA approach the acquisition and use of water control structures?

Several secondary questions are posed in each section, and you are invited to comment on all or some of these questions as time and interest allow.

## Have questions?

Additional information on all of these matters can be found in the *Current State Report,* June 2024.

An on-line presentation and Q&A session is planned for **4:30 pm Tuesday, July 16, 2024.** A recording of the session will be made available the following day at mvc.on.ca/current-initiatives/land-conservation-resource-management-strategies/

**The deadline for comment is September 6, 2024.**

**Comments can be submitted to** info@mvc.on.ca Re: Land Conservation Strategy

**or mailed to:** 10970 Hwy. No. 7, Carleton Place, ON K7C 3P1

# 1: Land Conservation

## **Question:** *What role should MVCA play in land conservation within its jurisdiction?*

Lands can be managed for the purpose of conservation or preservation purposes.

- Conservation sets aside land for limited uses to prevent overuse and harm to the environment. Typical uses include hiking, biking, and sustainable commercial activities such as camping and forestry.
- Preservation maintains land in a largely pristine state and tends to restrict all development, construction, and commercial activity. Some passive recreational use may be permitted as some sites.

The purpose of the *Conservation Authorities Act* is "to provide for the organization and delivery of programs and services that further the conservation, restoration, development and management of natural resources in watersheds in Ontario". In February 2008, an interjurisdictional committee[1] developed the following working interpretation of "conservation of land":

> *"maintaining or enhancing the natural features and hydrologic and ecological functions within the watershed."*

Within MVCA's jurisdiction, the Crown is the largest holder of natural heritage resources, on which camping, logging, and other uses are permitted. Almost all other publicly owned properties within the watershed permit some form of use.

The Mississippi-Madawaska Land Trust (MMLT) and the Nature Conservancy of Canada (NCC) own and/or manage several properties, some of which are preserved with limited access. Some conservation authorities in the province function as a land trust by accepting or managing donated land for preservation.[2] Ducks Unlimited Canada (DUCs) has acquired land in this area in support of recreational hunting.

The vast amount of natural resources "preserved" within the watershed with limited use by the public is privately owned land managed by individual property owners. This includes large tracts of wetlands and forest that play a critical role in the hydrologic and ecological functions of the watershed.

In accordance the with United Nations *Convention on Biological Diversity*[3], the federal government has set a target of conserving a quarter of Canada's lands and a quarter of its oceans by 2025, and working toward conserving 30% by 2030. These targets are to be achieved through a combination of regulatory designation of crown land, land acquisition and conservation easements, and private land stewardship.

**Options: Where do you think MVCA should focus its land conservation efforts?**

a) Preserving land to protect hydrological or ecological functions, with limited public use.
b) Conserving land to protect its hydrological or ecological functions, while providing for some public use.
c) A mix of conservation and preservation properties is appropriate.

[1] Ministry of Natural Resources/Conservation Ontario Section 28 Peer Review & Implementation Committee.
[2] MVCA has several small parcels mainly acquired in the early 1990s.
[3] Refer to: https://www.un.org/en/observances/biological-diversity-day/convention

# 2: Acquiring More Land

## **Question:** *Should MVCA acquire more land for conservation purposes?*

Acquiring land is one approach to achieving the purpose of the *Conservation Authority Act*, which is to "further the conservation, restoration, development and management of natural resources in watersheds in Ontario".

As discussed in the *Current State Report*, demand for recreational opportunities continues to grow in Eastern Ontario with growing populations, at the same time as there is pressure on land and natural resources to house and service those populations. There is an opportunity to mitigate pressures on natural resources while helping to meet demand for outdoor recreational facilities.

MVCA is regularly approached regarding potential land donations and sales to the Authority. Not all of the land has significant ecological or hydrologic values. Often people want to retain the developable portion of their property and turn undevelopable lands (wetlands and wetland forests) to MVCA. Currently, MVCA screens offers of land and forwards them to either Mississippi Madawaska Land Trust (MMLT) or other land trust, Ducks Unlimited Canada (DUCs), or the local municipality.

Currently, MVCA has no funds set aside to purchase and manage additional land for either conservation or preservation purposes. It also has no expropriation rights to do this. However, acquisition under CA regulation does not necessarily mean ownership. Acquiring land can take different forms:

Lease/License: A lease or occupancy license can be used to allow MVCA specific rights on a property over a defined amount of time. The Morris Island Conservation Area (established in the 1980s) and the Carp River Conservation Area (established in 2018) respectively, are leased and licenced from the City of Ottawa.

Conservation Easement: These are legally binding instruments whereby the landowner transfers/relinquishes specific rights, such as the ability to create building lots or cut trees, to an easement holder (usually a nature conservation organization or agency). Depending on the terms of the conservation easement agreement, the easement holder has the right and responsibility to inspect the property and ensure the terms of the conservation easement are being respected. These could be used to maintain either hydrologic or ecological integrity.

Stewardship Agreement: MVCA enters into short-term agreements with landowners participating in some stewardship programs whereby the owner must agree to maintain and protect the works funded by MVCA.

Land & Forest Management Agreements: These are contracts that a CA can enter into with a partner organization to actively manage and maintain properties on behalf of the owner. MVCA does annual forest management work on behalf of the County of Lanark.

**Question: Should MVCA acquire more land or enter into other agreements over the next 20 years to:**

a) increase public access to natural heritage areas?
b) protect ecological values and functions?
c) maintain hydrologic functions in the watershed?

# 3: Facility Types

## **Question:** *What type of facilities should MVCA operate?*

The following is a range of facilities that conservation authorities (CA) own or lease in Ontario. MVCA has the first four types of facilities:

a) Natural Heritage Parks (Purdon, Palmerston Canonto, Morris Island, Carp River CAs)
b) Cultural Heritage Sites (Mill of Kintail Museum, Gate House, Education Centre and Cloister)
c) Linear Parks (K&P CA)
d) Beaches (Palmerston Canonto CA)
e) Managed forests
f) Portage routes
g) Scenic Lookouts/Rest-stops
h) Camp sites and campgrounds
i) Boat Launches
j) Marinas

Recently enacted regulations state that CA facilities requiring the "direct support or supervision of staff" to deliver programming are ineligible for Municipal Levy funding. This change affects funding of several structures and programs at the Mill of Kintail including operation of the museum and education centre and space rentals. As noted in the *Current State Report*:

- In addition to MVCA, other major providers of natural heritage parkland in this jurisdiction are the federal and provincial governments, the City of Ottawa, and land trusts.
- Municipalities, the province, and the private sector provide boat launches, camp sites, campgrounds, and marinas in MVCA's jurisdiction. Some of MVCA's properties may be suitable for these purposes.
- The County of Lanark owns 4,057 ha. managed forests within the watershed.
- MVCA's Board has agreed in principle to turn over its 35 km section of the K&P Trail to the counties of Frontenac, Lanark, and Renfrew, which are collaborating on a major rail-trail system for Eastern Ontario.
- MVCA's Board has agreed to turn over the Palmerston Beach to the Township of North Frontenac upon resolution of land titles issues.
- Most museums in MVCA's jurisdiction are operated and maintained by not-for-profit organizations such as Ontario Heritage Trust or local heritage groups.
- There are a limited number of provincial look-outs and rest stops within MVCA's jurisdiction.
- There is no formal oversight or governing structure of portage routes in MVCA's jurisdiction.

**Questions:**

a) What type of facilities do you think MVCA should develop over the next 10-20 years?
b) Do you think MVCA should transfer the museum collection and its management to a heritage organization?
c) Do you think there is a role for MVCA in managing portage routes?

# 4: Permitted Uses

## **Question:** *What type of uses should MVCA permit at its Conservation Areas?*

Regulations[4] under the *Conservation Authorities Act* distinguish between active and passive recreation for funding purposes. However, these terms have a different meaning when used in normal conversation:

- Passive recreation typically involves a low level of site development such as picnic areas and trails, and can occur without need of additional equipment, organization, or supervision. All MVCA sites are developed to facilitate passive recreational use.
- Active recreation usually involves more intense use of a property and special site development to accommodate specific activities or equipment. There are limited active recreational facilities at MVCA properties: playground and basket ball courts at the Mill of Kintail; and snowmobiling on the K&P.
- Other activities that MVCA permits at the Mill of Kintail site are the following:
    - Operation of the Fred P. Lossing Observatory
    - Operation of Men's Shed and Ramsay Women's Institute *Tea on the Lawn*
    - Programming by the Mississippi Field Naturalist Clubs and local Scouts and Guides groups
    - Summer camps
    - Rentals for Orienteering races, festivals, filming movies

Other activities that MVCA or other conservation authorities have permitted over time include:

- Ice rinks and groomed cross-country ski trails
- Dedicated mountain bike trails
- Tree top trekking and zip-lining
- Watercraft rentals
- Music and related entertainment
- Native tree and plant nurseries

Most of these activities can be accessed at private and other public sites within the watershed. While they cannot be funded under the Municipal Levy, they could be used as a source of revenue if a business case demonstrated their financial viability. Income from these activities could potentially offset the cost of other unfunded programs and services.

**Questions:**

a) Are you supportive of the current mix of passive and active recreational activities at MVCA sites?
b) Are there specific passive or active recreational activities you think MVCA should investigate at one or more of its existing sites?
c) Do you think MVCA should consider acquiring one or more properties where a broader range of active recreational activities could be provided?

[4] O. Reg. 686/21.

# 5: Dam Properties

## **Question:** *How should MVCA approach the acquisition and use of water control structures?*

Since its formation in 1968, MVCA has acquired twelve water management facilities, all of which it built or assumed ownership of at the request or recommendation of others:

- Carleton Place Dam: acquired from Ontario Hydro at its request in 1973 following dam restoration. Today, the primarily function of the dam is to maintain recreational water levels on Mississippi Lake and secondarily for flood control and maintaining levels for the Town's and private surface water intakes.
- Widow Lake Dam: rebuilt defunct dam and acquired land from a private owner (at the recommendation of the province) in 1974. Today the dam is used primarily for flood mitigation and secondarily to provide fish spawning habitat.
- Bennett Lake Dam: built and acquired land in 1975 at the request of Tay Valley Township and the local cottage association to maintain recreational water levels.
- Farm Lake Dam: rebuilt and acquired by MVCA in 1976 at the request of North Frontenac Township to maintain recreational water levels on Farm Lake.
- Lanark Dam: rebuilt and acquired by MVCA in 1977 at the request of Lanark Highlands Township. Today the primary function of the dam is for flood mitigation and secondarily to maintain recreational water levels on Kerr Lake.
- Glen Cairn Flood Control Facility: constructed by MVCA in 1979 at the request of the province and the former City of Kanata to address flooding of Glen Cairn subdivision.
- Pine Lake Dam: built and acquired by MVCA in 1990 at the request of North Frontenac Township. Today the dam's primary function is to maintain recreational water levels on the lake, and secondarily for flood mitigation.
- The following dams were built by or purchased by the former Mississippi River Improvement Company (MRIC) over a century ago, and acquired by MVCA in 1991 as part of the company's dissolution and negotiations with the province: Shabomeka, Mazinaw, Kashwakamak, Mississagagon, and Big Gull. Today, their primary function is flood mitigation and secondarily to maintain recreational water levels on the lakes.

It is important to note that all of these dams were built or acquired at a time when conservation authorities received 85% funding from the province to build, operate, and maintain water and erosion control structures. Today, MVCA is eligible to receive up to 50% funding for capital improvements at flood and erosion control structures (not for dams whose primary purpose is to maintain recreational levels); and receives less than 3% of its annual operating budget from the province. Current regulations allow conservation authorities to assign costs amongst member municipalities based upon the benefit derived from the activity or structure.

Few MVCA dams have legal surveys registered on title. Because they bridge waterbodies, several intersect with municipally-owned shoreline allowances and require land use permits and/or have patented lands from the province. All dams require access to other public or private land to operate, maintain, and undertake capital improvements. Resolution of land ownership and easement rights will be required at all of these dams as they come due for repair or replacement.

Over time, the impacts of climate change and updated design standards could impact the footprint of MVCA dams and associated structures, the land affected by the raising and lowering of water levels, and road access and public safety requirements (safety booms, fences, etc.).

MVCA also operates six facilities on behalf of the province: Mosque Weir, Summit Lake Dam, Palmerston Lake Dam, Canonto Lake Dam, Malcolm Lake Dam, and Clayton Dam. At times, the province has indicated that it may decommission or dispose one or more of these structures, possibly to MVCA.

Finally, MVCA has been approached at times regarding hydro potential at its dams.

**Questions:**

a) Should MVCA permit hydro development at a dam where feasible and cost effective?
b) Should MVCA build or assume ownership of facilities whose primary purpose is hydro power generation?
c) Should MVCA build or assume ownership of facilities whose primary purpose is to maintain recreational water levels?
d) Should MVCA have different management and cost recovery approaches depending on the primary function of a dam?